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ENGR. CHRIS UGENYI
Managing Director

— PREFACE —

We guarantee success

IEC CAREER INVESTMENT LIMITED is a Career Research and Testing Company established as **IEC Computer Bureau in 1999.**

We offer Human Resource Management, Employment Testing, Entrepreneurship Training and Foreign Education Services.

IEC specializes in conducting Seminars, Workshops and Training Job Seekers for Employment Tests and interviews in Banks, Oil companies, Multinational Companies, Private Companies etc.

Apart from enlightening job seekers on how they can get their dream jobs, we also conduct employment tests and interviews for companies and organizations.

Our expertise in the area of recruitment is second to none in the country. Our well-trained staff utilize world class standards coupled with skillful efficiency and effectiveness to ensure that the best candidates are selected for interview and ultimately employment.

We focus exclusively on the placement of highly skilled and talented individuals in all sector of the economy. Our recruitment team comprises of professionals with hands-on experience in recruiting at all levels.

This is achieved by using Aptitude Tests as well as Psychometric Tests questions that are tailored to the given job descriptions.

We have a record of over five thousand job seekers whose training under our Programmes, Seminars and Workshops have earned them very good employment.

Our Seminars and Workshops have also taught many unemployed Nigerians how to transform and refine raw business ideas into innovative and realistic ideas that have helped them set up small businesses of their own.

This is the first indigenous company in Nigeria to write and publish Textbooks on Employment Tests, Interviews and Self-Employment.

We contribute on employment matters in some major Newspapers, Radios and Television in the country.

We are a voluntary consultant to National Youth Service Corps (**NYSC)** on Employment issues and Skill Acquisition.

I. E. C. Career is a corporate member of Institute of Personnel Management of Nigeria **(IPMN).**

PREPARING FOR AN ATTITUDE TEST

Here are a few suggestions to help you use your study time effectively

1. Study alone: You will concentrate better when you work by yourself. Keep a list of questions that you cannot answer and points that you are unsure of to talk over with a friend who is preparing for the same exam. Plan to exchange ideas at a joint review session just before the test.

2. Eliminate distractions: Disturbances caused by family and neighbor activities (telephone calls, chit-chat, TV programs, and so on) work to your disadvantage. Study in a quiet, private room.

3. Don't try to learn too much in one study period. If your mind starts to wander, take a short break and then return to your work.

4. Review what you have learned. When you have studied something thoroughly, be sure to review it the next day so that the information will be firmly fixed in your mind.

5. Answer all the questions in this book. Don't be satisfied merely with the correct answer to each question. Do additional research on the other choices that are given. You will broaden your background and be more adequately prepared for the actual exam. It's quite possible that a question on the exam that you are going to take may require you to be familiar with the other choices.

6. Tailor your study to the subject matter. Skim or scan. Don't study everything in the same manner. Obviously, certain areas are more important than others.

7. Organize yourself. Make sure that your notes are in good order. Valuable time is unnecessarily consumed when you can't find quickly what you are looking for.

8. Keep physical fitness. You cannot retain information well when you are uncomfortable, when you have headache, or when you are tensed. Physical health promotes mental efficiency.

PART ONE

QUANTITATIVE APTITUDE TESTS

Relevant for all company Aptitude Tests.
Study this section very carefully.

QUANTITATIVE REASONING TEST 1

70 QUESTIONS

30 MINUTES

DIRECTIONS

Each problem in this test involves a certain amount of logical reasoning and thinking on your part. Read each problem carefully and choose the correct answer from the five choices that follow. Blacken the corresponding space on your answer sheet.

1. Damilola had an average of 72 on his first four math tests. After taking the next test, his average dropped to 70. Which of the following is his most recent test grade?
   (A) 60
   (B) 62
   (C) 64
   (D) 66
   (E) 68

2. At a selling price N273, a refrigerator yield a 30% profit on the cost. What selling price will yield a 10% profit on the cost?
   (A) N210
   (B) N231
   (C) N221
   (D) N235
   (E) N240

3. If price are reduced 25% and sales increase 20%, what is the net effect on gross receipts?
   (A) They increase by 5%
   (B) They decrease by 5%
   (C) They remain the same
   (D) They increase by10%
   (E) They decrease by 10%

4. If 95% of the residents of Ikorodu Estate live in private homes and 40% of these live in air-conditioned homes, what percent of the resident of Ikorodu Estate live in air-conditioned homes?
   (A) 3%
   (B) 30%
   (C) 3.8%
   (D) 40%
   (E) 38%

5. What single discount is equivalent to two successive discounts of 10% and 15%?
   (A) 25%
   (B) 24%
   (C) 24.5%
   (D) 23.5%
   (E) 22%

6. David received his allowance on Sunday. He spends 1/4 of his allowance on Monday and 2/3 of the remainder on Tuesday. What part of his allowance is left for the rest of the week?
   (A) 1/3
   (B) 1/12
   (C) 1/4
   (D) ½
   (E) 4/7

7. A sales person receives a salary of N100 a week and a commission of 5% on all sales. What must be the amount of sales of a week in which the salesperson's total weekly income is N360?
   (A) N6,200
   (B) N5,200
   (C) N2,600
   (D) N720
   (E) N560

8. How many of the numbers between 100 and 300 begin or end with 2?
   (A) 20
   (B) 40
   (C) 100
   (D) 110
   (E) 180

9. If a merchant makes a profit of 20% based on the selling price of an article, what percent does the merchant make on the cost?
   (A) 20
   (B) 40
   (C) 25
   (D) 80
   (E) None of these

10. There is enough food at a picnic to feed 20 adults or 32 children. If there are 15 adults at the picnic, how many children can still be fed?
    (A) 6
    (B) 8
    (C) 12
    (D) 16
    (E) 18

11. In a certain company, 55% of the workers are men. If 30% of the workers are full-time employees and 60% of these are women, what percentage of the full-time workers in the company are men?
    (A) 12%
    (B) 40%
    (C) 60%
    (D) $66^{2}/_{3}$%
    (E) $77^{7}/_{9}$%

12. How many digits are there in the square root of a perfect square of 12 digits?
    (A) 10
    (B) 8
    (C) 4
    (D) 6
    (E) 5

13. *A* is 15 years old. *B* is one-third older. How many years ago was *B* twice as old as *A*?
    (A) 3
    (B) 5
    (C) 7.5
    (D) 8
    (E) 10

14. A gasoline tank is 1/4 full. After adding 10 gallons of gasoline, the gauge indicates that the tank is 2/3 full. Find the capacity of the tank in gallons.
    (A) 15
    (B) 18
    (C) 24
    (D) 30
    (E) 20

15. If the ratio of **x:y** is 9:7, what is the value of $x+y$?
    (A) 2
    (B) 14
    (C) 16
    (D) 63
    (E) it cannot be determined from the information

16. A 15-gallon mixture of 20% alcohol has 5 gallons of water added to it. The strength of the mixture, as a percent, is approximately.
    (A) $12^{1}/_{2}$
    (B) $13^{1}/_{3}$
    (C) 15
    (D) $16^{2}/_{3}$
    (E) 20

17. Village **A** has a population of 6,800, which is decreasing at a rate of 120 per year. Village **B** has a population of 4,200, which is increasing at a rate of 80 per year. In how many years will the population of the two villages be equal?
    (A) 9
    (B) 11
    (C) 13
    (D) 14
    (E) 16

18. Of 60 employees at the Asekoro Manufacturing Company, x employees are female. If $^{2}/_{3}$ of the remainder are married, how many unmarried men work for this company?
    (A) $40 - {}^{2}/_{3}x$
    (B) $40 - {}^{1}/_{3}x$
    (C) $40 + {}^{1}/_{3}x$
    (D) $20 - {}^{2}/_{3}x$
    (E) $20 - {}^{1}/_{3}x$

19. If 3 copier machines can copy 300 sheets in 3 hours, assuming the same rate, how long (in hours) will it take 6 such copiers to copy 600 sheets?
    (A) 4
    (B) 3
    (C) 5
    (D) 6
    (E) 2

20. If m men can paint a house in d days, how many days will it take $m + 2$ men to paint the same house?
    (A) $d+2$
    (B) $d-2$
    (C) $\frac{m+2}{md}$
    (D) $\frac{md}{m+2}$
    (E) $\frac{md+2d}{m}$

21. A maths class has 27 students in it. Of those students, 14 are also enrolled in history and 17 are enrolled in English. What is the minimum percentage of the students in the maths class who are also enrolled in history and English?
    (A) 15%
    (B) 22%
    (C) 49%
    (D) 63%
    (E) 91%

22. The distance from City *A* to City *B* is 150 miles and the distance from City *A* to City *C* is 90 miles. Therefore, it is necessarily true that.
    (A) the distance between *B* to *C* is 60 miles
    (B) six times the distance from *A* to *B* equals 10 times the distance from *A* to *C*
    (C) the distance from *B* to *C* is 240 miles
    (D) the distance from *A* to *B* exceeds by 30 miles twice the distance from *A* to *C*
    (E) three times the distance from *A* to *C* exceeds by 30 miles twice the distance from *A* to *B*.

23. A merchant sells a certain item for a price that is a whole number of naira. If the cost of the item to her is N50, then which of the following could be her profit as a percentage of her cost?
    (A) 15%
    (B) 25%
    (C) $33^{1}/_{3}$%
    (D) 40%
    (E) 75%

24. If the price of an item is increased by 10% and then decreased by 10%, the net effect on the price of the item is
    (A) an increase of 99%
    (B) an increase of 1%
    (C) no change
    (D) a decrease of 1%
    (E) a decrease of 11%

25. While researching a term paper, a student read pages 7 through 49 and pages 101 through 157 of a particular source book Altogether, how many pages from this book did this student read?
    (A) 98
    (B) 99
    (C) 100
    (D) 101
    (E) 102

26. If 3 people working together at the same rate can do a job in $5^1/_3$ days, what fraction of that job can two of these people do in one day?
(A) 1/16
(B) 1/8
(C) 3/16
(D) 1/2
(E) 2/3

27. If one-half of the female students in a certain college eat in the cafeteria and one-third of the male students eat there, what fractional part of the student body eats in the cafeteria?
(A) 5/12
(B) 2/5
(C) 3/4
(D) 5/6
(E) It cannot be determined from the information given

28. **3, 5, - 5 .....**
The first term in the sequence of numbers shown above is 3. Each even-numbered term is two more than the previous term and each odd-numbered term after the first is -1 times the previous term. For example, the second term is 3+2, and the third term is (-1) x 5. What is the 55th term of the sequence.
(A) -5
(B) -3
(C) -1
(D) 3
(E) 5

29. If interest on a savings account is paid monthly at an annual rate of $6^1/_4$ percent and if the interest is not reinvested, then in how many years will the total amount of interest earned equal the amount of money saved in the account?
(A) 36
(B) 24
(C) 18
(D) 16
(E) 12

30. Two ships leave from the same port at 11:30 A.M. If one sails due east at 20 miles per hour and the other due south at 15 miles per hour, how many miles apart are the ships at 2:30 P.M.?
(A) 25
(B) 50
(C) 75
(D) 80
(E) 85

31. In IEC Career Investment Ltd, the ratio of upper management to middle management personnel is 4 : 3. If 75% of upper management has experience in the production line, what is the greatest proportion of the total of upper and middle management personnel who could have experience, on the production line?
(A) 5/7
(B) 3/4
(C) 6/7
(D) 7/6
(E) 7/4

32. Let the "CHRIS" of a number be defined as three less than three times the number. What number is equal to its "CHRIS"?
(A) 1.5
(B) 2.0
(C) 3.5
(D) 1.0
(E) 2.5

33. If 15 cans of food are needed for seven adults for two days, the number of cans needed to feed four adults for seven days is
(A) 15
(B) 20
(C) 25
(D) 30
(E) 35

34. There are x cookies in a jar. One child eats $^1/_4$ of all the cookies. A second child eats $^1/_3$ of the remaining cookies. If the remaining cookies are distributed among four other children, what fraction of the original number of cookies did each of the four children receive?
(A) 7/12
(B) 1/2
(C) 5/12
(D) 1/6
(E) 1/8

35. A is 300 miles from B. The path of all points equidistant from A and B can best be described as
(A) a line || to AB and 150 miles north of AB
(B) a transverse segment cutting through AB at a 45^0 angle
(C) a circle with AB as its diameter
(D) the perpendicular bisector of AB
(E) the line AB

36. John is now three time Pat's age. Four years from now John will be x years old. In terms of x, how old is Pat now?
(A) $\frac{x+4}{3}$
(B) $3x$
(C) $x+4$
(D) $x-4$
(E) $\frac{x-4}{3}$

37. On an income of N15,000 a year, a clerk pays 15% in federal taxes and 10% of the remainder in state taxes. How much is left?
(A) N9,750
(B) N11,475
(C) N12.750
(D) N13,500
(E) N14,125

38. At IEC High School, the ratio of girls to boys is 2:1. If $^3/_5$ of the boys are on a team and the remaining 40 boys are not, how many girls are in the school?
(A) 50
(B) 200
(C) 150
(D) 100
(E) 250

39. If each of the dimensions of a rectangle is increased100%,the area is increased.
(A) 100%
(B) 200%
(C) 300%
(D) 400%
(E) 500%

40. If a discount of 20% off the marked price of a jacket results in a savings of N15, what is the discounted price of the jacket?
(A) N35
(B) N60
(C) N75
(D) N150
(E) N300

41. The sum of an odd number and an even number is
(A) sometimes an even number
(B) always divisible by 3 or 5 or 7
(C) always an odd number
(D) always a prime number (not divisible)
(E) always divisible by 2

42. Three times the first of three consecutive odd integers is 3 more than twice the third. Find the third integer.
(A) 7
(B) 9
(C) 11
(D) 13
(E) 15

43. The vertices of a triangle are *(3,1) (8, 1),* and *(8,3).* What is the area of this triangle?
(A) 5
(B) 10
(C) 12
(D) 14
(E) 20

44. If Ify has N5 more than Ugo, and if Ugo has N2 more than Obi, which of the following exchanges will ensure that each of the three has an equal amount of money?
(A) Ify must give Obi N3 and Ugo N1
(B) Ugo must give Ify N4 and Ify must give Obi N5
(C) Obi must give Ify N1 and Ify must give Ugo N1
(D) Ify must give Obi N4 and Ugo must give Obi N5
(E) Either Ify or Obi must give Ugo N7

45. A person is standing on a staircase. He walks down 4 steps, up 3 steps, down 6 steps, up 2 steps, up 9 steps, and down 2 steps. Where is he standing in relation to the step on which he started?
(A) 2 steps above
(B) 1 steps above
(C) the same place
(D) 1 steps above
(E) 4 steps above

46. An item costs 90% of its original price. If 90K is added to the discount price, the cost of the item will be equal to its original price. What is the original price of the item?
(A) N.09
(B) N.90
(C) N9.00
(D) N9.90
(E) N9.99

47. On a certain day, a news vendor began the day with *P* papers. Between opening and noon, he sold 40 percent of the papers, and between noon and closing, he sold 60 percent of the papers which remained. What percent of the original *P* papers did he sell?
(A) 0%
(B) 20%
(C) 24%
(D) 76%
(E) 100%

48. If the result obtained by multiplying a number, *x* by a number 1 less than itself is 4 less than multiplying *x* by itself, then x =
(A) 1
(B) 2
(C) 3
(D) 4
(E) 5

49. Mr. Abu grosses N2,000 per month from his mail-order business. If 40 percent of that amount goes for business expenses and 10 percent of the remainder is reinvested in the business, how much of the gross receipts is reinvested in the business?
(A) N80
(B) N100
(C) N110
(D) N120
(E) N200

50. Baba is 67. His son Ade is 29. In how many years will Ade be exactly half his father's age?
(A) 2
(B) 5
(C) 7
(D) 9
(E) 12

51. If the numerator of a fraction is decreased 25 percent and the denominator of that fraction is increased 25 percent, then the difference between the resulting and the original fractions represents what percentage decrease?
(A) 40%
(B) 45%
(C) 50%
(D) 60%
(E) 75%

52. A boy bought some packets of biscuits for N120. If the biscuits had been 3 Naira a packet cheaper, he would have received 2 more packets for his money. How many packets did he buy?
(A) 12
(B) 8
(C) 6
(D) 10
(E) 15

53. The distance from Lagos to Ibadan is 160km. If a commercial bus were 16km/h slower, it would take 20 minutes longer on the journey. What is the average speed of the bus?
(A) 80
(B) 45
(C) 74
(D) 96
(E) 120

54. In an office with 21 staff members, $^1/_3$ are men and $^2/_3$ are women. To obtain a staff in which $^1/_4$ are men, how many women should be hired?
(A) 7
(B) 5
(C) 3
(D) 2
(E) 1

55. From March 1 to March 31 the price of a certain commodity fell by $^1/_4$, and from April 1 to April 30 the price fell by $^1/_3$. By what percentage would the price of the commodity have to increase during the month of May to bring it back up to the level of March 1?
(A) $14^2/_7\%$
(B) 25%
(C) 50%
(D) $66^2/_3\%$
(E) 100%

56. On Monday, a depositor withdraws funds from his savings account equal to 10% of the amount on deposit, and on Friday he deposits N140. If there were no other transactions, and if the amount in the account following Friday's transaction was 125% of the original amount, how much money was originally in the account?
(A) N125
(B) N175
(C) N400
(D) N500
(E) N540

57. At the beginning of a class, a classroom has 3 empty chairs and all students are seated. No student leaves the classroom, and additional students equal to 20 percent of the number of students already seated enter the class late and fill the empty chairs. What is the total number of chairs in the classroom?
(A) 18
(B) 15
(C) 10
(D) 6
(E) 3

58. The value of a certain office machine depreciates in such a way that its value at the end of each year is $^4/_5$ of its value at the beginning of the same year. If the initial value of the machine is N5,000.What is its value at the end of 3 years?
(A) N4,750.25
(B) N4,000.00
(C) N2,560.00
(D) N2,000.00
(E) N640.00

59. A man buys some shirts and some ties. The shirts cost N700 each and the ties cost N300 each. If the man spends exactly N8100 and buys the maximum number of shirts possible under these conditions, what is the ratio of shirts to ties?
(A) 5:3
(B) 4:3
(C) 5:2
(D) 4:1
(E) 3:2

60. If the total sales for a business in a certain year were N150,000, what were sales in June, if June sales were half the monthly average?
(A) N6,250
(B) N12,500
(C) N15,000
(D) N25,000
(E) N48,000

61. A man drives from Lagos to Shagamu, a distance of 48km, in 45 minutes. Where the road is good, he drives at 72 km/h, where the road is bad, at 48km/h. What is the distance he travelled on the good road?
(A) 18
(B) 36
(C) 48
(D) 60
(E) 72

62. Yinka invested a sum of money at an annual simple interest rate of $10^1/_2\%$. At the end of 4 years the amount invested plus interest earned was N781.00. What was the naira amount of the original investment?
(A) N231.84
(B) N318.16
(C) N550.00
(D) N750.00
(E) N781.84

63. One-half of the employees of Bayo And Sons earn salaries above N18,000 annually. One-third of the remainder earn salaries between N15,000 and N18,000. What part of the staff earns below N15,000?
(A) 1/6
(B) 2/3
(C) 1/2
(D) 1/10
(E) 1/3

64. David has a newspaper route for which he collects k naira each day. From this amount he pays out k/3 naira per day for the cost of the paper, and he saves the rest of the money. In terms of k, how many days will it take David to save N1000?
(A) k/1500
(B) k/1000
(C) 1000/k
(D) 1500/k
(E) 1500k

65. A salesperson earn 5% on all sales between N200 and N600, and 8% on all sales over N600. What is her commission in a week in which her sales total N800?.
(A) N20
(B) N46
(C) N88
(D) N36
(E) N78

66. Stella invests N2,400 in the National Bank at 5%. How much additional money must she invest at 8% so that the total annual income will be equal to 6% of her entire investment?
(A) N2,400
(B) N3,600
(C) N1,000
(D) N3,000
(E) N1,200

67. The value of a fraction is 2/5. If the numerator is decreased by 2 and the denominator increased by 1, the resulting fraction is equivalent to 1/4 . Find the numerator of the original fraction.
(A) 3
(B) 4
(C) 6
(D) 10
(E) 15

68. Every letter in the alphabet has a number value which is equal to its place in the alphabet; the letter A has a value of 1 and C a value of 3. The number value of a word is obtained by adding up the value of the letters in the word and then multiplying that sum by the length of the word. The word "DFGH" would have a number value of
(A) 22
(B) 44
(C) 66
(D) 100
(E) 108

69. In a certain year, corporation X produced 40 percent of the total world production of a certain drug. If corporation X produced 18 kilograms of the drug, how many kilograms were produced by producers other than corporation X?
(A) 22
(B) 27
(C) 36
(D) 40
(E) 45

70. During a sale, a certain item is sold at a price 40% below its usual selling price. if the naira savings on the item is N12, then what is its *sale* price?
(A) N30
(B) N24
(C) N18
(D) N15
(E) N6

ANSWER KEY
QUANTITATIVE REASONING TEST 1

1.	B	11.	B	21.	A	31.	C	41.	C	51.	A	61.	B
2.	B	12.	D	22.	B	32.	A	42.	E	52.	B	62.	C
3.	E	13.	E	23.	D	33.	D	43.	A	53.	D	63.	E
4.	E	14.	C	24.	D	34.	E	44.	A	54.	A	64.	D
5.	D	15.	E	25.	C	35.	D	45.	A	55.	E	65.	D
6.	D	16.	C	26.	B	36.	B	46.	C	56.	C	66.	E
7.	B	17.	C	27.	E	37.	B	47.	D	57.	A	67.	C
8.	D	18.	E	28.	A	38.	B	48.	D	58.	C	68.	D
9.	C	19.	B	29.	D	39.	C	49.	D	59.	E	69.	B
10.	B	20.	D	30.	C	40.	B	50.	D	60.	A	70.	C

ANSWERS AND EXPLANATIONS

1. B Let x = Recent test grade

$$\frac{4(72)+x}{5} = 70$$

$288 + x = 350$

$x = 62$

2. B N273 represents 130% of the cost

$1.30x = 273$

$13x = 2730$

x = N210 = cost

The new price will add 10% of cost, or N21, for profit.

New price = N210 + N21 = N231

3. E Let original price = p, and original sales = s. Therefore, original gross receipts = ps. Let new price = .75p, and new sales = 1.20s. Therefore, new gross receipts = .90ps. i.e 1.20s x .75pGross receipts are only 90% of what they were.

4. E 40% = 2/5

2/5 of 95% = 38%

5. D Work with a simple figure, such as 100. First sale price is 90% of N100, or N90. Final sale price is 85% of N90, or N76.50

Total discount is N100 - N76.50

= N23.50

% of discount = 23.50/100 or 23.5%

6. D David spends 1/4 on Monday and 2/3 of the other 3/4, or 1/2 on Tuesday, leaving only 1/4 for the rest of the week.

7. B Let s = sales

N100 + .05s = 360

.05s = 260

5s = 26,000

s = N5,200

8. D All the numbers from 200 to 299 begin with 2. There are 100 of these. Then all numbers like 102, 112,....,192 end with 2. There are 10 of these.

Hence, there are 110 of such numbers.

9. C Use an easy amount of N100 for the selling price. If the profit is 20% of the selling price, or N20, the cost is N80. Profit based on cost is

20/80 = 1/4 = 25%

10. B If 15 adults are fed, 3/4 of the food is gone. 1/4 of the food will feed 1/4 x 32, or 8 children.

11. B This question can be solved using a table:

	Full-time	Part-time	Total
Men			
Women			
Total			

The table or matrix shows the possibilities. We begin to fill in the individual squares, or cells, by using the information provided:

	Full-time	Part-time	Total
Men			55%
Women			
Total	30%		

But we know that the total labor force is 100%, and this means that the percentages for full-time and part-time must equal 100 and that the percentages for Men and Women must equal 100. So we can fill in some further information.

	Full-time	Part-time	Total
Men			55%
Women			45%
Total	30%	70%	100%

Now, since we have totals indicated, we can use arithmetic to find the missing information:

	Full-time	Part-time	Total
Men	12%	43%	55%
Women	18%	27%	45%
Total	30%	70%	100%

Notice that all totals check out.

The final step is to use the information to answer the questions

$$\frac{\text{Men Full - Time}}{\text{Total Full - Time}} = \frac{.12}{.30} = \frac{2}{5} = 40\%$$

12. D For every pair of digits in a number, there will be one digit in the square root 6 Answer is 6

13. E $A = 15$

$B = 15 + 1/3\,(15) = 20$

15 - n is A's age n years ago

20 - n is B's age n years ago

$(20 - n) = 2(15-n)$

$20 - n = 30 - 2n$

n = 10

14. C Let x = capacity of tank

10 gallons is 2/3 - 1/4 of the tank

$2/3 - 1/4 = \frac{8-3}{12} = 5/12$

$5/12x = 10$

$5x = 120$

$X = 24$

15. E Remember, a ratio is a fraction. If x is 18 and y is 14, the ratio $x : y$ is $9:7$, but $x + y$ is 32. The point of this problem is that x and y can take on many possible values, just as long as the ratio $9:7$ is preserved. Given the multiplicity of possible values, it is not possible here to establish one definite value for the sum of x and y.

16. C The new solution is 3/20 pure alcohol or 15%

17. C Let x = no of years for 2 of the populations to be equal

Then $6800 - 120x = 4200 + 80x$

$2600 = 200x$

$x = 13$ years

18. E $60 - x$ employees are male

1/3 of these are unmarried

$1/3\,(60 - x) = 20 - 1/3x$

19. *B* The number of sheets is directly proportional to the number of machines and also directly proportional to the amount of time. Mathematically this can be expressed as:

$$\frac{\text{Sheets}}{(\text{Number of machines})(\text{time})} = \frac{\text{Sheets}}{(\text{Number of machines})(\text{time})}$$

$$\frac{300}{3\,(3)} = \frac{600}{6(t)}$$

$$\frac{300}{9} = \frac{600}{6t}$$

Reduce the fractions and then cross-multiply:

$$\frac{100}{3} = \frac{100}{t}$$

$$100t = 300$$

$$t = 3$$

20. D This is inverse variation

$m \times d = (m + 2)\,X\,x$

$$\frac{md}{m+2} = x$$

21. A 14 + 17 = 31. Therefore, there are 4 students who must be enrolled in all three courses, 4/27 is slightly larger than 4/28. The answer must be slightly larger than 1/7, which is $14^2/_7\%$.

22. B Cities *A, B,* and *C* need not be on a straight line; therefore, one cannot add or subtract miles. Six times the distance between *A* and *B* is 150 x 6 = 900, which is 10 times the distance between *A* and *C*, 10 X 90 = 900.

23. D Since the question stem has the form "which of the following could be....?, The proper approach is the test choices until you find one that works. Since her cost is N50, we test (A):

$$\frac{x}{\text{N50}} = .15$$

$$X = \text{N7.50}$$

But a naira profit or markup of N7.50 would generate a selling price of N57.50 - not a whole number. (B), (C), and (E) also yield fractional amounts. (D), however, yields a markup of N20 for a whole naira selling price.

24. D If we wish to compute the answer, let us start by saying that the original price of the item is x. A 10% increase in that price will be one-tenth of x, or .1x. When we add the increase to the original price, we find our

increased price is 1.1x. We must then take away 10% of that. Ten percent of 1.1x is .11x, and subtracting .11x from 1.1x, we get .99x. We started with x; we ended with .99x, so we lost .01x, which is 1%.

25. C This problem cannot be solved by simply doing subtraction. To give an example: if you read pages 1 and 2 of a book, how many pages have you read? The answer is obviously 2; we can conclude then that we do not obtain the answer by subtracting 1 from 2. Instead we subtract 1 from 2 and add 1.

49 - 7 + 1 = 43

157 - 101 + 1 = 57

43 + 57 = 100

26. B If 3 people take $5^1/_3$ days, then one person would take 3 times alone, or 16 days. Thus one person can do 1/16 of a job in a day. Two people can do twice as much of a job, or 1/8, in a day.

27. E There is no indication as to the exact percentage of students who eat in the cafeteria, since we do not know how many boys or girls there are.

28. A From the analysis of the question, the sequence is 3, 5, -5, -3, 3, 5, -5, -3..... It is obvious that each four term is continuous

:- 55/4 = 13 ¾ term

¾ is the 3rd term and also the

55th term = -5

29. D We simply want to find how long it will take to amass interest equal to 100 percent of the original amount saved. So we must divide 100 percent by the rate of interest per year, $6^1/_4$ percent, to get the number of years:

$$\frac{100}{6^1/_4} = 16$$

30. C In 3 hours, one ship went 60 miles, the other 45 miles. This is a 3-4-5 triangle as 45 =3(15), 60=4(5). The hypotenuse will be 5(15), or 75.

31. C First of all, (D) and (E) are impossible on logical grounds since they are greater than 1, and the proportion of something that has a characteristic cannot be greater than 1. That would be like saying., We need the total of upper and middle management with production line experience. The ratio 4:3 tells us that the total number of middle and upper management personnel in the company can be divided into 7 equal parts, with 4 of them in upper management and 3 in middle management. Of the 4 parts in upper

management, 75%, or 3/4, have experience on the production line. Three quarters of 4 part amounts to 3 part (3/7 of the total). You are not told how many of the middle management personnel have production line experience, but the key word "greater" tells you that you should consider all of the middle management personnel as having production line experience. This means that there are 3 parts from the upper management personnel who have production line experience and that there are 3 more part from the middle management personnel that are assumed to have production line experience, for a total of 6 parts out of 7, or 6/7.

32. A "CHRIS" =3n - 3
n = 3n-3
-2n = -3
n= 3/2 = 1.5

33. D Each adult needs 15 cans/7 adults = 15/7 cans in two days, or (½)(15/7) =15/14cans per adults per day. Multiply this by the number of adults and by the number of days.
(15/14)(4 adults)(7 days) = 30cans of food

34. E The first child leaves 3/4 of the cookies. The second child eats 1/3 of 3/4 and that leaves1/2. if the 1/2is divided among four children, then 1/2 divided by 4 is 1/8.

35. D The path of all points equidistant from two points is the perpendicular bisector of the segment which connects the two points. Therefore, the line that is perpendicular to *AB* and intersects it at 150 miles from *A* is the perpendicular bisector of *AB* (Remember, *A* and *B* are 300 miles apart).

36. B Let's substitute *J* for John and *P* for Pat
(*J* is 3 times *P*) $J = 3p$
(*J* in four years) $x = J + 4$
$J = x - 4$
$x - 4 = 3P$ *(since J= 3p)*
$P = \frac{x-4}{3}$

37. B After the 15% deduction, N12,750 is left. After the 10% is deducted from N12,750, N11,475 is left. Note that you cannot simply deduct 25% from the N15,000.

38. B 2/5 (Boys) = 40
Boys = 100
There are twice as many girls as boys.
girls = 200

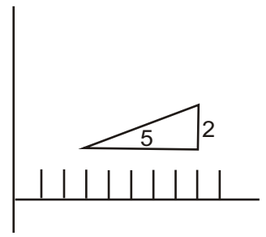
39. C If each of the dimensions is doubled, the area of the new rectangle is four times the size of the original one. The increase is three times, or 300%

40. B Let x = amount of marked price. Then
1/5 x = 15
x = 7
75 - 15 = N60

41. C If 2n is an even number, 2n+ 1 is odd.

42. E Let x = first integer
x + 2 = second integer
x + 4 = third integer
3(x) = 3 + 2 (x+4)
3x = 3 + 2x + 8
x = 11
:- Third integer = 11 + 4 = 15

43. A.



Right triangle area = $\frac{1}{2}$ x 5 x 2 = 5

44. A Let Obi have Nx
Ugo has N(x + 2)
and Ify has N(x + 2 + 5) = N(x + 7)
Average = $\frac{x + x + 2 + x + 7}{3}$
$= \frac{3x + 9}{3}$
Each person gets N(x + 3)
Ify must give Obi N3 and Ugo N1 so that each person has N(x + 3)

45. A Probably the easiest way to solve this problem is just to count the steps on your fingers, but the same process can be expressed mathematically. Let those steps he walks down be assigned negative values, and those steps he walks up be positive. We then have: -4 + 3 -6 + 2 + 9 - 2 = +2. So the person comes to rest two steps above where he started.

46. C Let original amount = x
Cost of item = 0.9x (90%)
If 90k is added
.9x + 0.9 = x
x - 0.9x = 0.9
0.1x = 0.9
$x = \frac{0.9}{0.1}$
x = N9.00

47. D Between opening and noon he sold 0.4p
Remaining 0.6p
Between noon and closing he sold
0.6 of 0.6p = 0.36p
Total sales = 0.4p + 0.36p = 0.76p
% sales = $\frac{0.76p}{p}$ x 100%
= 76%

48. D Translated into algebra, the question reads:
x(x) - x(x-1) = 4
$X^2 - x^2 + x = 4$
x = 4

49. D 40 percent of N2000, or N800, goes for business expenses. That leaves N1200. 10 percent of the remaining N1200, or N120, is reinvested.

50. D In x years ago
Baba ages 67 - x
Ade's age. 29 - x
For Ade to be half his fathers age
2(29 - x) = 67 - x
58 -2x = 67 - x
2x - x = 67 - 58
x = 9

51. A
Let the original fraction = 4/8
:- original numerator = 4
Original denominator = 8
Decreased numerator (0.75 of 4) = 3
increased denominator (1.25 of 8) = 10
:- New fraction = 3/10
Difference = $\frac{4}{8} - \frac{3}{10} = \frac{1}{5}$
% decrease = $\frac{\frac{1}{5}}{\frac{4}{8}} \times 100\%$
$= \frac{1}{5} \times \frac{8}{4} \times 100\%$
$= 40\%$

52. B Let x be number bought for N1.20
:- 1 packet $= \frac{120}{x}$
3 naira cheaper $= \frac{120}{x} - 3$
but he would then have received (x + 2) packets
so each would have cost = $\frac{120}{x+2}$
equating these two prices
$= \frac{120}{x} - 3 = \frac{120}{x+2}$
:- x = 8 or -10
A negative answer is unacceptable so
x = 8 packets of biscuits.

53. D
Let the speed = xkm/h
The time taken to travel 160km = $\frac{160}{x}$ hours
The time for 16km/h slower = $\frac{160}{x-16}$ hours
But this is 20 minutes or 1/3 hours more than traveling at xkh/h
$\frac{160}{x-16} - \frac{160}{x} = \frac{1}{3}$
x = 96 or -80
The negative speed is not acceptable, so the average speed = 96km/h

54. A If the office has 21 staff members there are 7 men, and 14 women. Since the office did not have more men.
:- ¼ of the new staff total = 7
i.e $\frac{1}{4}x = 7$
x = 28
28 - 7 = 21 women
Since there are 14 women already 7 more will be hired.

55. E One way of answering the question is to assign an arbitrary number to represent the price of the commodity on March 1. Let us assume it was N100. First, the price falls by ¼, from N100 to N75. Then it falls another 1/3 to N50. To return to its original level, the price must increase by N50, and N50 is 100% of N50.

56. C Let the amount on deposit = Nx
If 10% of the amount is withdrawn
N0.9x will remain
∴ N0.9x + N140 = N1.25x
N1.25x - N0.9x = N140
N0.35x = N140
$x = \frac{140}{0.35}$
x = N400

57. A Let total no of chairs in the class at the beginning = x
20% of x = 3 empty chairs
0.2x = 3
$x = \frac{3}{0.2}$
x = 15 chairs

∴ Total no of chairs = 15 + 3 = 18

58. C The machine depreciates by 20% yearly
∴ 1st year N5000 x $\frac{20}{100}$ = N1000
Remaining N4000
2nd year = N4000 x $\frac{20}{100}$ = N800
Remaining N3200
3rd year = N3200 x $\frac{20}{100}$ = N640
Value at the end of 3 yrs = N2560

59. E Let s = number of shirts and t = number of ties, where s and t are integers: Dividing all figures through by 100,
Then 7s + 3t = 81
7s = 81 - 3t
$S = \frac{81 - 3t}{7}$
Since s is an integer, t must have an integral value such that 81 - 3t is divisible by 7. Trial shows that t = 6 is the smallest such number, making
$s = \frac{81 - 18}{7} = 63/7 = 9$
Hence, s : t = 9 :6 = 3 :2.

60. A monthly average sales = $\frac{N150,000}{12}$
= N12,500
Since June is half of the monthly average
∴ June sales = $\frac{N12,500}{2}$ = N6,250

61. B Suppose there are x km of good road then there are 48 - x of bad road. He drives x km at 72km/h on good road.
Time = $\frac{x}{72}$
And he drives (48 - x) km at 48km/h
Time = $\frac{48 - x}{48}$
Total time taken = 45 mins. = ¾ hours
:- $\frac{x}{72} + \frac{48 - x}{48} = \frac{3}{4}$
= 36

62. C Let original investment = Nx
10.5% interest for 4 years = 10.5 x 4 = 42%
∴ Nx + 42% of x = N781
= 142% of x
$\frac{142x}{100} = 781$
142x = 78100
$X = \frac{78100}{142}$
X = N550

63. E One-half earn over N18,000. One -third of the other 1/2,or 1/6, earn between N15,000 and N18,000. This accounts for 1/2 + 1/6, or 3/6 + 1/6 = 4/6 = 2/3 of the staff, leaving 1/3 to earn below N15,000.

64. D Amount saved = $k - \frac{k}{3} = \frac{2k}{3}$
:- 1 day = $\frac{2k}{3}$
x days = N1000
Where x = number of days to save N1000
This is a direct variation
$\frac{1}{X} = \frac{2k/3}{1000}$
$\frac{2k}{3} = 1000$
$X = 1000 \times \frac{3}{2k}$
$X = \frac{1500}{K}$

65. D 5% of sales between N200 and N600 is .05(400) = N20.
8% of sales over N600 is .08(200)=N16.
Total commission = N20 + N16 = N36.

66. E If Stella invests x additional naira at 8%, her total investment will amount to 2400 + x naira.
.05(2400) + .08(x) = .06(2400 + x)
5(2400) + 8(x) = 6(2400 - x)
1200 + 8x = 14400 + 6x
2x = 2400
x = 1200

67. C
Let 2x = original numerator
5x = original denominator

$$\frac{2x-2}{5x+1} = \frac{1}{4}$$

Cross-multiply:

$8x - 8 = 5x + 1$

$3x = 9$

$x = 3$

Original numerator is 2(3), or 6

68. D D = 4, F = 6, G = 7, and H = 8 so the sum of the letters would be 25. 25 multiplied by 4 (the length of the word) is 100.

69. B
40% is to 18kg

60% is to xkg

Set up a proportion

$$\frac{40\%}{18} = \frac{60\%}{x}$$

$$x = \frac{18 \times 60}{40}$$

$x = 27$

70. C If the item is sold at a 40% discount, then the naria savings is equal to 40% of the usual price:

.40 X Usual Price = N12

$$\text{Usual Price} = \frac{N12}{.40} = N30$$

This is the usual selling price. The sale price is N12 less, or N18.

QUANTITATIVE REASONING TEST 2
75 Questions
30 Minutes

DIRECTIONS Each problem in this test involves a certain amount of logical reasoning and thinking on your part. Read each problem carefully and choose the correct answer from the five choices that follow. Blacken the corresponding space on your answer sheet.

1. What is the average of a student who received 90 in English, 84 in Algebra, 75 in French, and 76 in Music, if the subjects have the following weights: English 4, Algebra 3, French 3, and Music 1?
(A) 81
(B) $81^1/_2$
(C) 82
(D) $82^1/_2$
(E) 83

2. Chidi is 15 years older than his brother Peter. However, y years ago Chidi was twice as old as Peter. If Peter is now b years old and b > y, find the value of b - y.
(A) 13
(B) 14
(C) 15
(D) 16
(E) 17

3. A woman bought 12 hens at N1500 each. At the end of the year she obtained 24,000 eggs from them, which she sold at N40 a dozen. The cost of feeding for the year was N30,000. At the end of the year she sold 10 surviving hens for N1,250 each. What is her percentage profit?
(A) 63%
(B) 80%
(C) 100%
(D) 87.5%
(E) 92.7%

4. When the price of petrol is increased by 5%, a driver reduces her annual distance traveled by 5%. As a consequence, she finds that she saves N100 on her annual petrol bill. What was her annual petrol bill before the increase?
(A) N50,000
(B) N25,000
(C) N40,000
(D) N80,000
(E) N60,000

5. A cement mixture is composed of 3 elements: By weight, $^1/_3$ of the mixture is sand, $^3/_5$ of the mixture is water, and the remaining 12 pounds of the mixture is gravel. What is the weight of the entire mixture in pounds?
(A) 11.2
(B) 12.8
(C) 36
(D) 60
(E) 180

6. A man was standing 40 feet behind his car when a second car arrived and parked 90 feet from the first car. If the man is standing between the two cars how much closer is he to the first car than the second?
   (A) 30 feet
   (B) 50 feet
   (C) 10 feet
   (D) 70 feet

7. At a photocopy centre, the first 10 copies cost x kobo each. Each of the next 50 copies costs 50kobo less per copy. From the 61st copy on, the cost is 2 kobo per copy. In terms of x, how much does it cost in kobo to have 200 copies made?
   (A) 60x + 30
   (B) 50x - 10
   (C) 50(x - 5)
   (D) 60x - 10
   (E) 10x + 490

8. Four men working together can dig a ditch in 42 days. They begin, but 1 man works only half-days. How long will it take to complete the job?
   (A) 48 days
   (B) 45 days
   (C) 43 days
   (D) 44 days

9. Half the graduating class of a college was accepted by a business school. One-third of the class was accepted by a law school. If one-fifth of the class was accepted to both types of school. What fraction of the class was accepted only by a law school?
   (A) 1/60
   (B) 2/15
   (C) 1/3
   (D) 1/2
   (E) 4/5

10. Exactly three years before the year in which Anna was born, the year was 1980-x. In terms of x, on Anna's twentieth birthday, the year will be
   (A) 1977 + x
   (B) 1997 + x
   (C) 2003 - x
   (D) 2003 + x
   (E) 2006 + x

11. A and B together earn N2,100. If B is paid one-fourth more than A, how much should B receive?
   (A) N1,166.66
   (B) N1,162.66
   (C) N1,617.66
   (D) N1.167.66

12. A man insures 80% of his property and paid a $2^1/_2$% premium amounting to N348. What is the total value of his property?
   (A) N19,000
   (B) N18,400

   (C) N18,000
   (D) N17,400
   (E) N13,920

13. A tank is 3/4 full. Pipe A can fill the tank in 12 minutes. Pipe B can empty it in 8 minutes. If both pipe are open, how long will it take to empty the tank?
   (A) 14 min.
   (B) 22 min.
   (C) 16 min.
   (D) 18 min.

14. If a certain chemical costs N50 for 30 gallons, then how many gallons of the chemical can be purchased for N625?
   (A) 12.5
   (B) 24
   (C) 325
   (D) 375
   (E) 425

15. If N300 is invested at simple interest so as to yield a return of N18 in nine months, the amount of money that must be invested at the same rate of interest so as to yield a return of N120 in six months is
   (A) N3000
   (B) N3300
   (C) N2000
   (D) N2300

16. If 1/2x years ago John was 12 and 1/2x years from now he will be 2x years old, how old will he be 3x years from now?
   (A) 18
   (B) 24
   (C) 30
   (D) 54
   (E) It cannot be determined from the information given

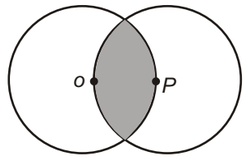
17. Two ships are 1,550 miles apart sailing towards each other. One sails at the rate of 85 miles per day and the other at 65 miles per day. How far apart will they be at the end of nine days?
   (A) 180 miles
   (B) 200 miles
   (C) 220 miles
   (D) 240 miles

18. A salesperson works 50 weeks each year and makes an average (arithmetic mean)of 100 sales per week. If each sale is worth an average (arithmetic mean) of N1,000, then what is the total value of sales made by the salesperson in a year?
   (A) N50,000
   (B) N100,000
   (C) N500,000
   (D) N1,000,000
   (E) N5,000,000

19. Today Jim is twice as old as Fred, and Sam is 2 years younger than Fred. Four years ago Jim was 4 times as old as Sam. How old is Jim now?
(A) 8
(B) 12
(C) 16
(D) 20
(E) 24

20. A student worked 30 days at a part-time job. He paid two-fifths of his earnings for room and board and had N81 left. What was his daily wage?
(A) N4.50
(B) N5.00
(C) N5.50
(D) N6.25

21. Bola borrowed N240, interest free from her parents to pay for her college education. If she pays back 21/2 percent of this amount quarterly, and has already paid N42, for how many months has She been paying back her loan?
(A) 6
(B) 7
(C) 19
(D) 21
(E) 24



22. In the figure above, if the radius of the circles is 1, then what is the perimeter of the shaded part of the figure?
(A) 1/6π
(B) 2/3π
(C) 4/3π
(D) 3/2π
(E) cannot be determined from the information given.

23. Two trains running on the same track travel at the rates of 25 and 30 miles an hour. If the first train starts out an hour earlier, how long will it take the second train to catch up with it?
(A) 2 hr.
(B) 3 hr.
(C) 4 hr.
(D) 5 hr.

24. The owner of a boutique decide to calculate the percentage of customers who purchase hats. If 40 percent of the stores customers decide to purchase items, and of those customers 15 percent purchase hats what percent of the store's customers purchase hats?

(A) 4%
(B) 6%
(C) 15%
(D) 24%
(E) 55%

25. On a list price of N200, the difference between a single discount of 25 percent and successive discounts of 20 percent and 5 percent is
(A) N0
(B) N48
(C) N8
(D) N2

26. A store raised the price of an item by exactly 10 percent. Which of the following could NOT be the resulting price of the item?
(A) N5.50
(B) N7.60
(C) N11.00
(D) N12.10
(E) N75.90

27. In 1997, a particular item A cost N2,500. In 1998, the price of A went up 20% because of inflation while in early 1999 there was a 10% increase in the price of A over its 1998 price. In June of 1999, A was put on sale with a 30% decrease in price. What was the sale price of A?
(A) 2500
(B) 2400
(C) 2310
(D) 2110

28. When the principal is N600, the difference over the course of one year between simple interest of 12% per annum and interest compounded semiannually at 12% per annum is
(A) N2.16
(B) N21.60
(C) N.22
(D) N0.00

29. In Tejuosho market, a woman sells 1/3 as many peppers as onions, and ½ as many tomatoes as peppers. If there are equal numbers of fishes and tomatoes. What percent of food stuffs in her shop are onions?
(A) 10%
(B) 33%
(C) 40%
(D) 50%
(E) 60%

30. Six gross of special drawing pencils were purchased for use in a department. If the pencils were used at the rate of 24 a week, the maximum number of weeks that the six gross of pencils would last is.
(A) 6 weeks
(B) 12 weeks
(C) 24 weeks
(D) 36 weeks

31. A tank holding $1m^3$ of water is filled in 10 minutes by a circular pipe of diameter 2cm. What is the speed of the water in the pipe?
(A) 7.62
(B) 3.90
(C) 6.25
(D) 5.30
(E) 8.41

32. A car averages 40 miles per hour for the first 6 hours of a trip and averages 60 miles per hour for each additional hour of travel time. If the average speed for the entire trip is 55 miles per hour, how many hours long is the trip?
(A) 8
(B) 12
(C) 16
(D) 18
(E) 24

33. If the following were arranged in order of magnitude, which term would be the middle number in the series?
(A) $3^8/3^6$
(B) $3^3 - 1$
(C) 3^0
(D) 3^{27}
(E) $3(3^2)$

34. How many integers between 100 and 150, inclusive, can be evenly divided by neither 3 nor 5?
(A) 33
(B) 28
(C) 27
(D) 26
(E) 24

35. A Bank department employs 1400 people, of whom 35 percent are cash officers and one-eighth are marketing officers. The number of employees in the bank who are neither cash officers nor marketing officers is
(A) 640
(B) 665
(C) 735
(D) 750

36. If Dupe had 3 times as many oranges as she actually has, she would have 1/3 as many oranges as Dele has. What is the ratio of the number of oranges Dupe has to the number of oranges Dele has?
(A) 1/9
(B) 1/3
(C) 1/1
(D) 3/1
(E) 9/1

37. Two cylindrical tanks have the same height, but the radius of one tank equals the diameter of the other. If the volume of the larger is k% more than the volume of the smaller, k =
(A) 50
(B) 100
(C) 200
(D) 300
(E) 400

38. A and B do a job together in 2 hours. Working alone, A does the job in 5 hours. How long will it take B to do the job alone?
(A) $3^1/_3$ hours
(B) $2^1/_4$ hours
(C) 3 hours
(D) 2 hours

39. A sequence of numbers begins 1, 1, 1, 2, 2, 3 and then repeats this pattern forever. What is the sum of the 135th,136th,and137th numbers in the sequence?
(A) 3
(B) 4
(C) 5
(D) 6
(E) 7

40. A lady withdraws from her savings account 10% of the original sum in the bank. If she must add N900 to bring the amount in the bank back up to the original sum, what was the original sum in the bank?
(A) N10,000
(B) N19,000
(C) N80,.000
(D) N90,000
(E) N90,900

41. Uche purchased some shares of stock at N10 per share. Six months later the stock was worth N20 per share. What was the percent increase in the value of Uche's investment?
(A) 20%
(B) 50%
(C) 100%
(D) 200%
(E) the answer depends on the number of shares purchased.

42. A man's taxable income is N14,280. The state tax instructions tell him to pay 2% on the first N3000 of his taxable income, 3% on each of the second and third N3000, and 4% on the remainder. What is the total amount of income tax that he must pay?
(A) N265.40
(B) N309.32
(C) N451.20
(D) N454.62

43. In a certain group of people, 3/8 of the people are men, and 2/3 of the men have brown eyes. If 3/4 of the people have brown eyes, then what fraction of the group are women who do not have brown eyes?
(A) 1/8
(B) 3/16
(C) 1/4
(D) 5/16
(E) 3/8

44. A junior salesman gets a commission of 14 percent on his sales. If he wants his commission to amount to N140, he will have to sell merchandise totalling.
(A) N1.960
(B) N10
(C) N1,000
(D) N100

45. A man is standing between a bank and a drug store. He is 60 feet away from the bank and the drug store is 100 feet away from the bank. How many feet nearer is the man to the bank than the drug store is to the bank?
(A) 60 feet
(B) 40 feet
(C) 50 feet
(D) 20 feet

46. If, in five days, a clerk can copy 125 pages of thirty-six lines each, with eleven words to the line, how many pages of thirty lines each and twelve words to the line can he copy in 6 days?
(A) 145
(B) 155
(C) 160
(D) 165

47. The cost of manufacturing a car is made up of three items: cost of materials, labour and overheads. In 1974, the cost of these items were in the ratio 4:3:2. In 1975, the cost of materials rose by 10%, the cost of labour increased by 8% but the overheads reduced by 5%. Find the increase percent in the price of a car.
(A) 6%
(B) 5%
(C) 1%
(D) 10%
(E) 9%

48. The estate of a wealthy man was distributed as follows: 10% to his wife, 5% divided equally among his three children, 5% divided equally among his five grandchildren, and the balance to a charitable trust. If the trust received N1,000,000, how much did each grandchild inherit?
(A) N10,000
(B) N 12,500
(C) N20,000
(D) N62,500
(E) N100,000

49. A car completes a 10-mile trip in 20 minutes. If it does one half the distance at a speed of 20 miles an hour, then its speed for the remainder of the distance must be
(A) 30 mph
(B) 40 mph
(C) 50 mph
(D) 60 mph

50. A certain pole casts a shadow 24 feet long. At the same time another pole 3 feet high casts a shadow 4 feet long. How high is the first pole, given that the heights and shadows are in proportion?
(A) 18 ft.
(B) 19 ft.
(C) 20 ft.
(D) 21 ft.

51. Two people start at the same point and walk in opposite directions. If one walks at the rate of 2 miles per hour and the other walks at the rate of 3 miles per hour, in how many hours will they be 20 miles apart?
(A) 2
(B) 3
(C) 4
(D) 5

52. A school's honor society has 100 members: 40 boys and 60 girls, of whom 30 are junior and 70 are seniors. What is the smallest possible number of senior boys in the society?
(A) 0
(B) 5
(C) 10
(D) 15
(E) 20

53. Mr. Sule receives a salary of N3000 per week plus 2 percent commission on sales. What were his total earnings for a week in which his sales were N58,460?
(A) N4069.20
(B) N4169.92
(C) N4269.92
(D) N4369.20

54. Each integer from 1 to 50 whose units digit is a 7 is written on a separate slip of paper. If the slips are placed in a box and one is picked at random, what is the probability that the number picked is prime?
(A) 1/2
(B) 2/3
(C) 4/5
(D) 3/4
(E) 3/5

55 How many times between midnight and noon of the same day will the minute hand and the hour hand of a clock form a right angle?
(A) 20
(B) 22
(C) 21
(D) 25
(E) 24

56. Ngozi created a sequence of five numbers. She chose a number for the first term and got each successive term by using the following rule: alternately add 6 to the preceding term and double the preceding term. The second term of Ngozi's sequence was 6 more than the first, the third term was double the second, the fourth term was 6 more than the third, and the fifth term was double the fourth. If the fifth number was 1996, what number did Ngozi chose for the first term?
(A) 100
(B) 490
(C) 190
(D) 200
(E) 300

57. There are 12 men on a basketball team, and in a game 5 of them play at any one time. If the game is 1 hour long, and if each man plays exactly the same amount of time, how many minutes does each man play?
(A) 10
(B) 12
(C) 24
(D) 25
(E) 30

58. A certain family spends 30 percent of its income for food, 8 percent for clothing, 25 percent for shelter, 4 percent for recreation, 13 percent for education, and 5 percent for miscellaneous items. The weekly earnings are N500. Assuming that any money left over is put into savings, what is the number of weeks it would take this family to save N15,000?
(A) 100
(B) 150
(C) 175
(D) 200

$$\begin{array}{r} AB \\ +\ CD \\ \hline AAA \end{array}$$

59. In the addition problem above, A, B, C, and D are positive integers. What is the value of C?
(A) 1
(B) 3
(C) 7
(D) 9
(E) it cannot be determined from the information given

60. $x + y = 10$ $y + z = 15$ $x + z = 17$
What is the average (arithmetic mean) of x, y, and z?
(A) 7
(B) 14
(C) 15
(D) 21
(E) it cannot be determined from the information given

61. A number of people boarded a bus at the terminal. At the first stop, half of the passengers got off and 1 got on. At the second stop, 1/3 of the passengers on the bus got off and 1 got on. If the bus then had 15 passengers, how many were there when the bus left the terminal?
(A) 40
(B) 48
(C) 58
(D) 60
(E) 62

62. If **c** carpenters can complete a job in d days, how many days will it take **e** carpenters, working at the same rate, to complete p% of the job?
(A) cdp/100e
(B) ep/100cd
(C) 100cd/pe
(D) cep/100d
(E) cdep/100

63. A can type 500 form letters in 5 hours. B can type 400 of these forms in 5 hours. If A and B are to work together, the number of hours it will take them to type 540 form letters is most nearly.
(A) 2
(B) 3
(C) 4
(D) 5

64. In a particular company, 2 employees received hourly wages of N450, 3 employees received hourly wages of N415, and 5 employees received hourly wages of N475. The average hourly wage of this group of employees is
(A) N437
(B) N447
(C) N452
(D) N463

65. A circle graph shows that 32 percent of the tourists to a city are German, 28 percent are Spanish, 20 percent are English, 10 percent are miscellaneous, and the rest are French. How many degrees of the circle should be devoted to the French?
(A) 12
(B) 24
(C) 30
(D) 36

66. Kunle has the same number of red and blue marbles. He puts them in two jars so that the ratios of the number of red marbles to blue marbles in jar 1 is 2:5 and in jar II is 9:5. If there are 84 marbles in jar 1, how many are there in jar II?
(A) 126
(B) 120
(C) 100
(D) 130
(E) 115

67. A motorist travels 15km to the litre of petrol and 600km to the litre of oil- he estimates that an annual distance of 6000km will cost him N204 in petrol and oil. In fact he used twice as much oil as he estimated and the cost was N216. Find the cost of a litre of petrol?
(A) 50
(B) 84
(C) 30
(D) 48
(E) 4

68. What is the remainder when 5^{20} is divided by 100?
(A) 0
(B) 5
(C) 10
(D) 25
(E) 50

69. 10% more than 10% less than x is what percent of 10x?
(A) 9%
(B) 9.9%
(C) 10%
(D) 99%
(E) 100%

70. If it is now 1:15, what time will it be when the hour hand has moved through an angle of 10^{o}?
(A) 1:25
(B) 1:35
(C) 2:15
(D) 3:15
(E) 11:15

71. Aaron was 24 when his daughter Sarah was born. If Aaron is now 3 times as old as Sarah, how many years ago was Aaron 4 times as old as Sarah?
(A) 4
(B) 6
(C) 8
(D) 12
(E) 18

72. A cube whose edges are 3 inches is painted blue. The cube is then cut into smaller cubes, all of which have edges that are 1 inch long. How many of the small cubes have no paint on them?
(A) 0
(B) 1
(C) 3
(D) 4
(E) 9

73. Femi spent N125 for a camera and some film. The camera cost N100 more than the film. What percent of the cost of the two items did Femi spend for the camera?
(A) 40%
(B) 90%
(C) 60%
(D) 100%
(E) 20%

74. Ali, Buba, Shehu, and Ahmed shared a N1000 prize, Buba got twice as much as Ali, Shehu got 3 times as much as Ali, and Ahmed got N100. How much, in naria, did Ali get?
(A) 150
(B) 100
(C) 200
(D) 250
(E) 300

75. If the perimeter of square I and the diagonal of square II have the same length, what is the ratio of the area of square I to the area of square II?
(A) 12:5
(B) 5:12
(C) 1:8
(D) 3:4
(E) 2:1

ANSWER KEY
QUANTITATIVE REASONING TEST 2

1.	E	21.	D	41.	E	61.	A
2.	C	22.	C	42.	C	62.	A
3.	E	23.	D	43.	A	63.	B
4.	C	24.	B	44.	C	64.	C
5.	E	25.	D	45.	B	65.	D
6.	C	26.	B	46.	D	66.	A
7.	A	27.	C	47.	A	67.	D
8.	A	28.	A	48.	B	68.	D
9.	B	29.	E	49.	D	69.	B
10.	C	30.	D	50.	A	70.	B
11.	A	31.	D	51.	C	71.	A
12.	D	32.	E	52.	C	72.	B
13.	D	33.	B	53.	B	73.	B
14.	D	34.	C	54.	C	74.	A
15.	A	35.	C	55.	B	75.	C
16.	D	36.	A	56.	B		
17.	B	37.	D	57.	D		
18.	E	38.	A	58.	D		
19.	D	39.	C	59.	D		
20.	A	40.	D	60.	A		

ANSWERS AND EXPLANATIONS TEST 2

1. (90 x 4) + (84 x 3) + (75 x 3) + (76 x 1) =
360 + 252 + 225 + 76 = 913
Weight = 4 + 3 + 3 + 1 = 11
913 11 = 83 average (E)

2. b = Peter's age now
b + 15 = Chidi's age now
b - y = Peter's age y years ago
b + 15 - y = Chidi's age y years ago
b + 15 - y = 2(b-y)
b + 15 - y = 2b - 2y
15 = b -y (C)

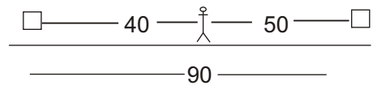
3. 12 hens cost = 12 x 1500
= 18000
2400 eggs divided by 12
Multiply by N40 = N80,000
Cost of feeding = N30,000
Selling price of 10 hen at N1,250 = N12,500
Total cost = 18,000 + 30,000
= 48,000
Total sales = 80,000 + 12,500
= 92,500
Profit = 92,500 - 48,000
= 44,500
Percentage profit = $\frac{44,500}{48,000}$ x 100%
= 92.7% (E)

4. Let the initial price of petrol = Nx
Let initial distance travelled = ykm
5% increase in petrol price = $\frac{105}{100}$ X x
= 1.05x
5% decrease in distance travelled = $\frac{95}{100}$ x y
= 0.95y
New petrol bill = 1.05x multiply by 0.95y
= 0.997xy
old petrol bill = xy
Difference = 0.997xy - xy = N100
xy = N40,000 (C)

5. If the weight of the mixture = x
1/3 of the mixture = x/3 (quantity of sand)
Water = 3x/5
:- $\frac{x}{3} + \frac{3x}{5} + 12 = x$

$\frac{x}{3} + \frac{3x}{5} = x - 12$

5x + 9x = (x-12) 15
14x = 15x - 180
:- 15x - 14x = 180
x = 180 (E)

6. 

The second car is 90ft - 40ft = 50ft from the man. The first car is 40ft from the man. The first is 50ft -40ft = 10ft closer than the first car. (C)

7. Pick a number for x. How about 8? The first 10 copies = 10 x 8 = 80 kobo.
The next 50 copies each cost 5 kobo less than the first 10, so each of these copies cost 8 - 5 or 3 kobo.
The next 50 copies = 50 x 3 = 150 kobo
From now on, the cost is 2 kobo for any additional copies. We need a total of 200 copies. So far we've done 60 copies. We need an additional 140 copies.
The final 140 copies = 140 x 2 = 280 kobo
80 kobo
150 kobo
+ 280 kobo
510 kobo

All we have to do is find out which answer choices equals 510. Start with choice (A),
60x + 30, remember x = 8
60 (8) + 30 = 510. A is the answer (Try other choices if you are not convinced) (A)

8. It would take 1 man 42 x 4 = 168 days to complete the job, working alone. If 3½ men are working(one man works half days, the other 3 work full days), the job would take
168 3½ = 48 days. (A)

9. One number that is evenly divisible by 2, 3, and 5 is 30. So let's plug in 30 for the number of people in the graduating class.

One half of the class got into business school.
(½ of 30 = 15)
One third of the class got into law school.
(1/3 of 30 = 10)
One fifth of the class got into both
(1/5 of 30 = 6)

Ten people were accepted by a law school, but 6 of those 10 were also accepted by a business school. Therefore 4 people out of 30 were accepted only by a law school. Reduced, 4/30 is 2/15 (B)

10. Create a formula. Anna was born three years after 1980 - x, so she was born in 1980 - x + 3. 20 years later the year will be 1980 - x + 3 + 20 = 2003 - x. (C)

11. Let A equal the amount A earned, and B equal the amount B earned.
Together, they earned A + B = N2,100.....(i)

B's salary = 5/4 of A's

i.e B = 5/4 A.....(ii)

From equ. .....(i)
A = 2100 - B

Substitute in equ. .....(ii)

B = 5/4 (2100 - B)

B = 2625 - 5/4 B

B + $\frac{5}{4}$ B = 2625

$\frac{9}{4}$B = 2625

B = 2625 x 4/9

B = 1,166.66 (A)

12. Let value of property = x
0.8x x 0.025 = 348

0.8x = $\frac{348}{0.025}$

= 13,920

x = $\frac{13,920}{0.8}$

= 17,400 (D)

13. Pipe A can fill the tank in 12 min or fill 1/12 of the tank in 1 minute. Pipe B can empty the tank in 8 minutes or empty 1/8 of the tank in 1 minute. In 1 minute, 1/8 - 1/12 of the tank is emptied (since 1/8 is greater than 1/12)

$\frac{1}{8} = \frac{3}{24}$

$\frac{1}{12} = \frac{2}{24}$

$\left(\frac{3}{24}\right) - \left(\frac{2}{24}\right)$ = 1/24 of the tank is emptied per minute
It would take 24 minutes to empty whole tank, but it is only 3/4 full:

$\frac{3}{4}$ x $\frac{4}{}$ = 18 minutes (D)

14. $\frac{N50}{30} = \frac{N625}{x}$

Cross-multiply: 50x = 18,750

Divide by 50: x = 375 (D)

15. Principal = N300
Interest = N18
Time = $\frac{9}{12}$ years = $\frac{3}{4}$ year

N300 x 3/4 = N225

N18 225 = .08

Rate is 8%

To yield N120 at 8% in 6 months:
Interest = N120

Rate = .08

Time = 1/2year

.08 x 1/2 = .04

N120 .04 = N3000 must be invested (A)

16. Since 1/2x years ago John was 12, he is now 12 + 1/2x; and 1/2x years from now he will be 12 + 1/2x + 1/2x = 12 + x.

But we are told, at that time he will be 2x years old,

So 12 + x = 2x

x = 12

:- He is now 12 + 6 = 18

3x or 36 years from now he will be 36 + 18 = 54. (D)

17. 85 m x 9 days = 765 m
5 m x 9 days = 585 m
= 1350 m

1550 m 1350 m = 200 miles apart at the end of nine days. (B)

18. E This is essentially a bookkeeping problem, and all you need to do is multiply the numbers to find the total value of sales: 50 weeks x 100 sales per week = 5,000 sales; 5,000 sales x N1,000 per sale = N5,000,000.

19. Let Fred's age now = x
:- Jim's age now = 2x
and Sam's age now = x - 2
Jim's age 4 years ago = 2x - 4
Sam's age 4 years ago = x - 2 - 4
= x - 6

:- 2x - 4 = 4(x - 6)
2x - 4 = 4x - 24
4x - 2x = 24 - 4
2x = 20
x = 10
:- Jim's age now = 2 x 10 = 20 years (D)

20. If two-fifth of his salary was used, then three-fifth was left; three-fifth of his salary is N81. Now, since his salary is unknown, let x represent it:

$\frac{3}{5}X \; x = N81$

divide both sides by $\frac{3}{5}$

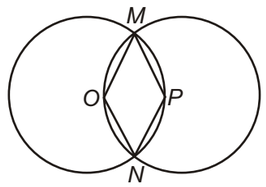
X=N81 3/5

$x = N81 \times \frac{5}{3}$

x = N135

His salary is N135 for 30 days of work. To find the daily wage, divide the salary by 30:
N135 30 days = N4.50 day
Daily wage = N4.50 (A)

21. Bola is paying back 2.5 percent of the loan each quarter of the year. 2.5% of N240 is N6.00. If she has already paid N42.00, that means she has paid that N6.00 for seven quarters. How many months is that? Each quarter of the year is 3 months. The correct answer is choice (D).

22. 

The triangles are equilateral (OM, ON, PM, PN, and OP are all radii), and angles MON and MPN are both 120^0. So each arc is 120^0, or 1/3 of the circle. Since the radius of the circle is 1, the circumference of each circle is 2 (1) = 2 .
Therefore, each arc is 1/3 of 2 , or 2 /3. Together, they total 2 /3 + 2 /3 = 4 /3. (C)

23. 30 m - 25 m = 5 m gain per 1 hr.
During the first hour, the first train travels 25 miles
25 m ÷ 5 mph = 5 hrs (D)

24. Let's say there were 100 customers. 40 of them purchase something. The problem says that 15% of the 40 purchase hats. 15% of 40 is 6. (B)

25. 25% of N200 = .25 x N200 = N50
Next, find the 20% discount on N200:

0.20 x N200 = N40

The list price is N200 - N40 = N160

Now take 5% of N160:
0.05 x N160 = N8

The discount is N48 when taken at 20% and 5% successively.

N50 - N48 = N2 (D)

26. In this back solving question, four of the five choices could be the result of raising a price by 10%. One of them could not. You might have noticed that it was relatively easy to figure out two of the choices. Choice (A) N5.50 was clearly the result of adding 10% of N5.00 (50 kobo) to N5.00. Choice (C) was clearly the result of adding 10% of N10.00 (or N1) to N10.00. Thus, we could eliminate (A) and (C). If this was as far as you could get, it made sense to guess among the remaining answer choices. Remember, if you can eliminate even one choice, you should

guess. To eliminate the other two answer choices was tougher, and it helped to try to extrapolate from one of the choices that was easier to see. For example, we knew that choice (C) was the result of adding 10% of N10 (or N1) to N10. Mathematically, what did we do? We took an amount x, added 10% of x to that and set it equal to N11.00:

X + .1(x) = N11

And x turned out to equal N10, a round number.

Let's try this with choice (D) N12.10:

x + .1(x) = N12.10

If you do the math, x turns out to equal N11.00, a round number. We can eliminate choice (D).

Let's try it with choice (B) N7.60. This time, x is not a round number at all; it works out to about N6.9090...., A repeating decimal. (B)

27. Sales price (1999) = N2,310
1997: cost of A = N2,500
1998: cost of A = N2500 + $\left(\frac{20}{100} \times 2500\right)$
= N3000
1999: cost of A = 3000 + $\left(\frac{10}{100} \times 3000\right)$
= N3300
Sales price (1999) = N3300 - $\left(\frac{30}{100} \times 3300\right)$
= N2310 (C)

28. Simple interest: = 600 x 0.12 x 1
= N72

Compound interest for first period
= 600 x 0.1.2 x 1/2
= 36

New principal = 636

Compound interest for second period
= 636 x 0.1.2 x ½
= N38.16

New principal = N674.16

Total interest = N74.16

Difference = N74.16 - N72
= N2.16 (A)

29. Let onions = 30
:- Pepper = 10 i.e 1/3 of 30
Tomatoes= 5 (1/2 of 10)
Fishes = 5 (equal with Tomatoes)
Total = 30 + 10+ 5 + 5 = 50
% of onion = $\frac{30}{50} \times 100\%$
= 60% (E)

30. One gross = 144 pencils

6 gross = 144/gross x 6 gross = 864 pencils (on hand)

If 24 pencils are used each week, divide to find the number of weeks they will last:

864 divided by 24/week = 36 weeks

Supplies would last 36 weeks. (D)

31. The area of cross section of the pipe
= $\cancel{}cm^2 = \frac{\cancel{}}{100 \times 100} m^2$
If Vm/s is the speed of water in the pipe,
The volume discharged per second
= $\frac{\cancel{}v}{100 \times 100} m^2$
But 1m is discharged in 10 minutes
:- $\frac{1}{10 \times 60} M^2$ are discharged per second

:- $\frac{\cancel{}v}{100 \times 100} = \frac{1}{10 \times 60,}$ V = 5.30

32. Distance for first 6 hrs
= 6 x 40 = 240miles
Let x = additional hours
:- distance = X x 60 = 60 miles
Total distance = 240 + 60x
Total time = 60 + x
Average speed = $\frac{\text{distance}}{\text{Time}}$ = 55m/h

$= \frac{240 + 60x}{6 + x} = 55$

240 + 60x = 330 - 55x
60x - 55x = 330 - 240
5x = 90
x = 18hrs
:- Total time = 18 + 6 = 24 hrs (E)

33. We can order the elements by clarifying the exponents:
(A) $\frac{3^8}{3^6} = 3^{8-6} = 3^2 = 9$
(B) $3^3 - 1 = 27 - 1 = 26$
(C) $3^0 = 1$
(D) 3^{27} is too large to compute here, but it obviously the greatest quantity in the group
(E) $3(3^2) = 3^3 = 27$
The order is (C), (A), (B), (E), (D); so (B) is the middle term (B)

34. There are 51 integers between 100 and 150, 100, 105, 110, 115, 120, 125, 130, 135, 140, 145, 150 are numbers that are evenly divisible by 5 i.e 11 numbers.

102, 105, 108, 111, 114, 117, 120 123, 126, 129, 132, 135, 138 141, 144, 147, 150 are numbers divisible by 3 i.e 17 numbers.

But 105, 120, 135, 150 appears twice and cannot be counted twice.

:- 11 + 17 - 4 = 24

and numbers that can be divisible by neither 3 nor 5 is 51 - 24 = 27 (C)

35. Total employees = 1400

35% cash officers = 1400 x 0.35 = 490

1/8 marketing officers = 1400 x 1/8 = 175
Together (490 + 175 = 665), there are 665 cash and marketing officers. To find how many employees are neither, subtract:
1400 - 665 = 735 (C)

36. Let x be the number of oranges that Dupe has. Then 3x is 1/3 the number of orange Dele has, so Dele has 9x orange. The ratio is x:9x or 1:9.

Pick an easy-to-use number. Assume that Dele has 1 orange. If he had 3 times as many, he would have 3; and if 3 is 1/3 the number that Dele has, Dele has 9. The ratio is 1:9. (A)

37. The volume of the small tank is $\pi r^2 h$, and the volume of the large tank is $\pi(2r)^2 h$, which equals $4\pi r^2 h$, so the large tank is 4 times the size of the small one. Be careful! This is an increase of 300% not 400%. (4 is 3 more than 1, so is 300% more than 1). Therefore, k = 300. (D)

38. If **A** can do the job alone in 5 hours, **A** can do 1/5 of the job in 1hour. working together, **A** and **B** can do the job in 2 hours, therefore in 1 hour they do 1/2 the job, in 1 hour, **B** alone does

$\frac{1}{2} - \frac{1}{5} = \frac{5}{10} - \frac{2}{10}$

$= \frac{3}{10}$

It would take **B** 10/3 hours = $3^1/_3$ hours to do the whole job alone. (A)

39. Since the pattern has six digits, divide 135 by 6. The quotient is 22, and the remainder is 3. Since 22 x 6 = 132, the 132nd number completes the pattern for the 22nd time. Then the 133rd, 134th, and 135th numbers are 1's, and the 136th and 137th are 2's; and their sum is 1 + 2 + 2 = 5. (C)

40. In simple English, the N900 the lady must replace to bring the amount back up to its original amount is 10% of the original amount. Expressed in notation that is:
N900 = .10 of x
N90,000 = x
(D)

41. The percent increase in Uche's investment is
$\frac{\text{Actual increase}}{\text{Original value}}$ x 100%. Each share was

Originally worth N10, and the actual increase In value of each share was N10. percent increase in value =
$\frac{10}{10}$ x 100% = 100%
(E)

42. First N3000: 02 x N3000 = N60.00
Second N3000: 03 x N3000 = N90.00
Third N3000: 04 x N5280 = N90.00

Remainder (N14,280 - N9000);
.04 x 5280 = N211.20
Total Tax = N451.20
(C)

43. A table will help us organize the information:

	Brown	Not-Brown	Total
Men			
Women			
Total			

Filling the information given:

	Brown	Not-Brown	Total
Men	1/4		3/8
Women			
Total	3/4		

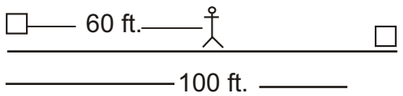
Notice that we enter 1/4 in the square for men with brown eyes. This is because 2/3 of the 3/8 of the people who are men have brown eyes. Finally, we complete the table:

	Brown	Not-Brown	Total
Men	1/4	1/8	3/8
Women	½	1/8	5/8
Total	3/4	1/4	1

A

44. 14% of x = N140 (Let x be the total sales)
0.04 X x = N140
x = 1000 (divide by 0.04) (C)

45. To determine how many feet nearer the man is to the bank than the drug store is to bank, use a diagram.



The total distance from the bank to the drug store is 100 feet. Subtract to find the distance from the man to the drug store.

100 feet - 60 feet = 40 feet

The man is 40 feet nearer to the bank than the drug store is to the bank. (B)

46. 36 lines X 11 words = 396 words on each page 125 pages x 396 words = 49,500 words in 5 days.

49,500 5 = 9,900 words in 1 day
12 words X 30 lines = 360 words on each page

9,900 360 = $27^1/_2$ pages in 1 day

$27^1/_2$ X 6 = 165 pages in 6 days (D)

47. Let the cost be N900
:- Material = 4/9 x N900
= N400
Labour = 3/9 x N900
= N300
Overheads = 2/9 x N900
= N200
In 1975
Material = N400 x 1.10
= N440
Labour = N300 x 1.08
= N324
Overheads = N200 x 0.95
= N190
Total cost in 1975 = N954
% increase = $\frac{54}{900}$ x 1005
= 6% (A)

48. The trust received 80% of the estate (10% went to the man's wife, 5% to his children, and 5% to his grandchildren). If E represents the value of the estate, then

.80E = 1,000,000

E = 1,000,000 0.80 = 1,250,000
Each grandchild received 1% (one-fifth of 5%) of the estate, or N12,500. (B)

49. First part of trip = 1/2of 10 miles = 5 miles

Time for first part = 5 20
= 1/4 hour
= 15 minutes

Second part of trip was 5 miles, completed in 20 - 15 minutes or 5 minutes.

5 minutes = 1/12hour

Rate = 5 miles 1/12 hr
= 60 mph (D)

50. If **f** is the height of the first pole, the proportion is:

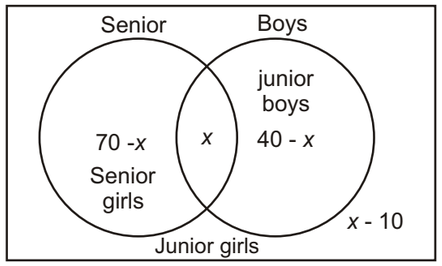
$$\frac{f}{24} = \frac{3}{4}$$

$$f = \frac{24 \times 3}{4}$$

= 18 ft. (A)

51. After 1 hour, they will be 5 miles apart.
20 miles 5 miles = 4 hr. (C)

52. Draw a Venn diagram and label each region. Let x be the number of senior boys. Then 40 - x is the number of boys who are not seniors (i.e., are junior, and 70 - x is the number of seniors who are not boys (i.e., are girls). Then



number of junior girls =
100 - [(40 - x) + x + (70 - x) =
100 - [110 - x] = x - 10

Since the number of junior girls must be at least 0, x - 10 0 x 10 (C)

53. Commission = 2% of N58,460
= .02 X N58,460
= N116.92

Salary + commission = N3000 + N1169.20
= N4169.20 (B)

54. There are five integers less than 50 whose units digit is 7:7, 17, 27, 37, and 47. Of these, four (all but 27) are prime. Then, the probability of drawing a prime is 4/5 (C)

55. Be careful. It may seem as though a right angle is formed 24 times - twice each hour (e.g at about 12:15 and 12:45, actually at 12:16 $^{4}/_{11}$ and 12:49 $^{1}/_{11}$).

In fact, a right angle is formed twice each hour; but between 2:00 and 3:00 this occurs at about 2;27 and 3:00 exactly 3:00 and about 3:33. Therefore, 3:00 gets counted twice and so does 9:00. This answer, then, is 22. (B)

56. Let x be the number Ngozi chose. Then the other terms are as follows:

Term	2	3	4	5
Expression	x + 6	2(x + 6) = 2x+12	2x + 12+6= 2x +18	2(2x + 18)= 4x +36

Finally, 4x + 36 = 1996
4x = 160
x = 490 (B)

57. Since the game takes 1 hour, or 60 minutes, and there are always 5 men playing, there is a total 5 x 60 = 300 man-minutes of playing time. If that amount of time is evenly divided among the 12 players, each one plays
300 12 = 25 minutes. (D)

58. The family spends a total of 85 percent of its income.
Therefore, 100% - 85%, or 15%, remains for savings.

15% of N500 = .15 x N500
= N75 per week

N15,000 N75 = 200 weeks (D)

59. The sum of 2 two-digit numbers must be less than 200, so A = 1 and the sum is 111. Since B and D are positive, B + D cannot be 1, and so must be 11, which means that a 1 is carried into the tens column. In the tens column we must add 1 (for A), the 1 we carried, and C, and the sum is 11. Then 1 + 1 + C = 11, and C = 9.

$$\begin{array}{r} 1B \\ +\ CD \\ \hline 111 \end{array}$$

B, D can be any digits whose sum is 11.

C = 9 (D)

60. When you have more than two equations, Add them.

$$\begin{array}{r} x + y = 10 \\ y + z = 15 \\ +\ x + z = 17 \\ \hline 2x + 2y + 2z = 42 \end{array}$$

Divide by 2:
To get the average, divide the sum by 3:

$$x + y + z = 21$$

$$\frac{x + y + z}{3} = \frac{21}{3} = 7$$

(Note: You could solve for x, y, z, but you shouldn't) (A)

61. Let x = the number of passengers originally on the bus, and keep track of the comings and goings. At the first stop half the people got off, leaving 1/2x on the bus, and 1 more got on: 1/2x + 1. At the second stop 1/3 of the passengers got off, leaving two-thirds on the bus, and 1 person got on
2/3 $\left(\frac{1}{2}x + 1\right) + 1$
This simplifies to 1/3x + 2/3 + 1, which equals 15, so

1/3x + 2/3 = 14 x + 2 = 42 x = 40 (A)

62. If c carpenters can complete a job in d days, then 1 carpenter will take c times as long, or cd days, to complete the job and
$\frac{p\,cd}{100} = \frac{cdp}{100}$ days to complete p% of the job,

Finally, if the work is divided up among e Carpenters, they will take $\frac{cdp}{100}$ e = $\frac{cdp}{100e}$ days. (A)

63. A can type 500 5 = 100 letters per hour
B can type 400 5 = 80 letters per hour

Together they can type 180 letters per hour.

540 180 = 3
It will take 3 hours to type 540 letters (B)

64. 2 X N450 = N9.00
3 X N415 = 12.45
5 X 475 = + 23.75
N45.20

N45.20 10 = N4.52 (C)

65. The total must be 100 percent

German	32%
Spanish	28%
English	20%
Miscellaneous	10%
	90%

Therefore, 100% - 90%, or 10% are French.
A circle contains 360°
10% of 3600 = .10 X 360°
= 36° (D)

66. Since the 84 marbles in jar 1 are divided in the ratio of 2:5, we get 84 = 2x + 5x = 7x x = 12. Then, jar 1 contain 24 red and 60 blue marbles.

	Red	Blue	Total
Jar I	24	60	84
Jar II	9w	5w	14w
Total	24+9w	60+5w	

Since the total number of red and of blue marbles is the same,

24 + 9w = 60 + 5w = 36 w = 9.

Therefore, jar II contains 14 X 9 = 126 marbles. (A)

67. Let cost of petrol = x kobo
and cost of oil = y kobo

Assuming he used 400 litres of petrol and 10 litres of oil

The cost is (400x + 10y) kobo
:- 400x + 10y = 20400 .....(i)

He actually used 20 litres of oil
:- 400x + 20y = 21600 .....(ii)

Subtract (i) from (ii)
= 10y = 1200
y = 120

Substitute in (i)
400 x + 600 = 20400
400x = 19,200
x = 48 (D)

68. When an integer is divided by 100, the remainder is just the last two digits of that integer (100 goes into 273 2 times with a remainder of 73). Except for 5 itself, every power of 5 ends in the digits **25**: 25, 125, 625, 3125,... (D)

69. Substitute a simple number for x. Since this is a percent problem, choose 10 or 110. Let x = 10: 10% less than 10 is 9, and 10% more than 9 is 9.9. Now, what percent of 100 (10x) is 9.9? The answer is 9.9%. (B)

70. Every hour the hour hand moves through 30^0 (1/12 of 360^0). It will move through 10^0 in 1/3 hour, or 20 minutes; and 20 minutes after 1:15 the time is 1:35. (B)

71. Organize the data in a table. Assume Aaron was 4 times as old as Sarah after x years and 3 times as old after y years.

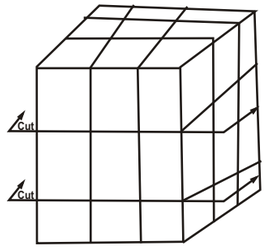
Time	Aaron's Age	Sarah's Age
When Sarah was born	24	0
x years later	24+x	x
Y years later	24 + y	y

$24 + x = 4x \;\; 3x = 24 \;\; x = 8;$

$24 + y = 3y \;\; 2y = 24 \;\; y = 12$

Aaron was 4 times as old as Sarah 4 years ago. (They are now 36 and 12;4 years ago they were 32 and 8). (A)

72. This question just require good visualization. Think of the cube as being cut into three slices, as in the figure below. All 9 little cubes in the top row and in the bottom row are painted, and all but the centre cube in the middle row is painted. Only 1 small cube is unpainted. (B)



73. If x = the cost of the film, then 100 + x = price of the camera, and

$125 = x + (100 + x) = 2x + 100$
$2x = 25 \;\; x = 12.5,$

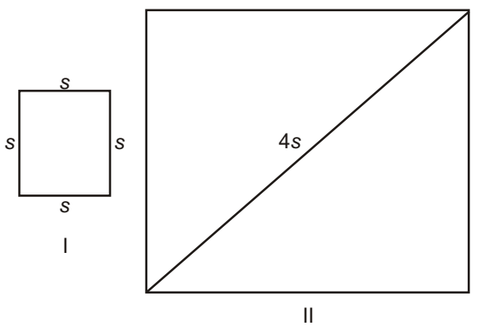
Which is 10% of the total cost of 125. The camera cost 90% of the total. (B)

74. Since Ahmed got N100, the other three shared the remaining N900. If x represents Ali's share, then Buba got 2x and Shehu got 3x. Then.

$900 = x + 2x + 3x = 6x \;\; x = 150$ (A)

75. Draw and label a diagram. Let s
Represent a side of square I. Then the perimeter of square I and the diagonal of square II are each 4s, and the area of square I is s^2. The easiest way to get the area of square II is to use the formula
$A = 1/2d^2$
$A = 1/2(4s)^2 = 1/216s^2 = 8s^2$

Then, the ratio of the two areas is $s^2/8s^2 = 1/8$ or .125 (C)



QUANTITATIVE REASONING TEST 3

70 QUESTIONS

30 MINUTES

DIRECTIONS Each problem in this test involves a certain amount of logical reasoning and thinking on your part. Read each problem carefully and choose the correct answer from the five choices that follow. Blacken the corresponding space on your answer sheet.

1. I am 10% older than my wife. What % is my wife younger than me?
   (A) 8.99%
   (B) 10.00%
   (C) 9.09%
   (D) 11.11%
   (E) 10.99%

2. A sells to B at a gain of 20%; B sells to C at the price A paid. What does B lose as a percentage?
   (A) 20%
   (B) 17%
   (C) 15%
   (D) $16^2/_3$%
   (E) 12%

3. The price of a share rose 25% yesterday and fell 25% today. What is the total rise or fall percent?
   (A) 25% fall
   (B) 50% rise
   (C) 25% rise
   (D) $6^1/_4$% fall
   (E) No change

4. A shopkeeper marks her goods to gain 35%. She allows 10% discount for cash. Find her percentage profit when sold for cash.
   (A) 135%
   (B) 13.50%
   (C) 121.50%
   (D) 50%
   (E) 21.5%

5. A man buys eggs at 55kobo a score. He finds that 10% of the eggs are unsaleable but sells the rest at 60kobo per dozen. Find his percentage profit.
   (A) 63.6%
   (B) 58.4%
   (C) 12.10%
   (D) 19.8%
   (E) 33%

6. A motorist reduces his annual distance traveled by x% when the price of petrol is increased by y%. Find the increase percent in his petrol bill.
   (A) (y-x)%
   (B) xy/100%
   (C) (x-xy)/100%
   (D) (y - x - xy/100)%
   (E) xy%

7. A bookseller makes a profit of 20% by selling a certain book for 90 kobo. When she has sold 90% of her stock, she finds she has to sell the rest at a sale price of 60 kobo each. What percentage profit does she make on the transaction?
   (A) 18%
   (B) 16%
   (C) 15%
   (D) 17%
   (E) 14%

8. By selling an article for N5.35, a shopkeeper gain 7%. What should the selling price be for a profit of 15%?
   (A) N5.50
   (B) N5.75
   (C) N5.00
   (D) N5.20
   (E) N5.60

9. A wholesaler sells goods to a retailer at a profit of 20%. The retailer sells to a customer at a profit of 80% more than the cost to the wholesaler. What is the retailer's percentage profit?
   (A) 60%
   (B) 30%
   (C) 80%
   (D) 70
   (E) 50%

10. I sold 12 eggs at the price for which I bought 20 eggs. What is my percentage profit?
   (A) 66.67%
   (B) 57.6%
   (C) 47.9%
   (D) 12%
   (E) 20%

11. A circle is inscribed in a square. Express the area of the circle as a percentage of the area of the square.
   (A) 30%
   (B) 85.7%
   (C) 78.5%
   (D) 50%
   (E) 100%

12. A train is scheduled to cover a certain distance in a certain time. Owing to stoppages, the train driver estimates that he must cover the distance in 75% of the scheduled time. By what percent must he increase his speed?
   (A) $33^{1}/_{3}\%$
   (B) 30%
   (C) 35%
   (D) $38^{3}/_{4}\%$
   (E) $21^{1}/_{2}\%$

13. A man has four biros of different colours. He takes at least one to work each day. For how many consecutive days can he take a different selection to work?
   (A) 12
   (B) 20
   (C) 15
   (D) 30
   (E) 18

14. Chidi does as much work in three hours as Peter does in four hours. Peter's son works half as fast as Peter. If the three working together are paid N8.50k, how much should Peter's son receive.
   (A) N2.00
   (B) N4.50
   (C) N3.00
   (D) N1.50
   (E) N2.20

15. If A is half as old as B and B is half as old as C and the sum of their three ages is 114 years, find the age of A.
   (A) 36
   (B) 50
   (C) 63
   (D) 54
   (E) 45

16. If Ann lends N400 for 9 months, Yinka lends N300 for 8 months and the interest paid is N25, how much should Ann receive?
   (A) N15
   (B) N12
   (C) N18
   (D) N10
   (E) N17

17. If $x : y = 3^{1}/_{2} : 2^{1}/_{3}$
   and $y : z = 1^{1}/_{4} : 2^{1}/_{7}$
   Find $x : y : z$
   (A) 3 : 4 : 5
   (B) 11 : 13 : 10
   (C) 15 : 10 : 7
   (D) $1^{1}/_{2} : 2^{2}/_{3}$: 7/8
   (E) 21 : 14 : 24

18. Two partners Silas and Uche invested N3000 and N1800 respectively in a business. It is agreed that Uche should take 30% of the profits for running the business and that the remaining profit should be divided between them in the ratio of the capital investments. What percentage of the profits will Silas receive?
   (A) 54%
   (B) $62^{1}/_{2}\%$
   (C) 43.75%
   (D) 37.5%
   (E) 45%

19. The cost of printing a book was N5000 for 4000 copies. The publisher sold to a bookshop at a profit of 15% and the bookseller sold the book at N2.10. What is the bookseller's profit percent?
   (A) $33^{1}/_{2}\%$
   (B) $41.^{2}/_{3}\%$
   (C) 46.1%
   (D) 37.8%
   (E) 60%

20. If the price of an electronics is N22,000. To this must be added VAT at 15%, what is the selling price?
   (A) N25,300
   (B) N3,300
   (C) N28,600
   (D) N22,000
   (E) N20,000

21. An investigator rented a car for four days and was charged N200. The car rental company charged N10 per day plus N.20 per mile. How many miles did the investigator drive the car?
   (A) 800
   (B) 950
   (C) 1,000
   (D) 1,200
   (E) none of these

22. In a government office, 1/6 of the employee favored abandoning a flexible work schedule system. In a second office that had the same number of employees, 1/4 of the workers favored abandoning it. What is the average of the fractions of the workers in the two offices who favored abandoning the system?
   (A) 1/10
   (B) 1/5
   (C) 5/24
   (D) 5/12

23. A man had his personal computer repaired at a cost of N49.20. This amount included a charge of N22 per hour for labor and a charge for a new switch that cost N18 before a 10% discount was applied. How long did the repair job take?
   (A) 1 hour 6 minutes
   (B) 1 hour 11 minutes
   (C) 1 hour 22 minutes
   (D) 1 hour 30 minutes
   (E) none of these

24. In a large postal agency where mail is delivered in motorized carts, two tyres were replaced on a cart at a cost of N34 per tyres. If the agency had expected to pay N80 for the two tyres, what percent of its expected cost did it save?
   (A) 7.5%
   (B) 17.6%
   (C) 57.5%
   (D) 75.0%
   (E) none of these

25. An inter-agency task force has representatives from three different agencies. Half of the task force members represent Agency A, one-third represent Agency B, and three represent Agency C. How many people are on the task force?
   (A) 12
   (B) 15
   (C) 18
   (D) 24
   (E) none of these

26. It has been established in recent productivity studies that, on the average, it takes a filing clerk 2 hours and 12 minutes to file four drawer of a filing cabinet. At this rate, how long would it take two clerks to file 16 drawers?
   (A) 4 hours
   (B) 4 hours 20 minutes
   (C) 8 hours
   (D) 8 hours 40 minutes
   (E) none of these

27. It costs N60,000 per month to maintain a small medical facility. The basic charge per person for treatment is N40, but 50% of those seeking treatment average charge of N20 per person. How many patients per month would the facility have to serve in order to cover its costs?
(A) 1,000
(B) 1,200
(C) 1,500
(D) 2,000
(E) none of these

28. An experimental antipollution vehicle powered by electricity traveled 33 kilometers (km) at a constant speed of 110 kilometers per hour (km/h). How many minutes did it take this vehicle to complete its experimental run?
(A) 3
(B) 10
(C) 18
(D) 20
(E) none of these

29. It takes two typists three 8-hours work days to type a report on a word processor. How many typists would be needed to type two reports of the same length in one 8-hour work days?
(A) 4
(B) 6
(C) 8
(D) 12
(E) none of these

30. A clerk is able to process 40 unemployment compensation claims in one hour. After deductions of 18% for benefits and taxes, the clerk's net pay is N6.97 per hour. If the clerk processed 1,200 claims, how much would the government have to pay for the work, based on the clerk's hourly wage before deductions?
(A) N278.80
(B) N255.00
(C) N246.74
(D) N209.10
(E) none of these

31. If the average of x, y, and 30 is 10, then the average of x and y is
(A) 0
(B) 5
(C) 71/2
(D) 10
(E) 30

32. All of the 120 seniors in a High School are members of the chess club, the pep club, or both. If 90 seniors are in the pep club and 70 seniors are in the chess club, how many seniors are in both clubs?
(A) 10
(B) 20
(C) 30
(D) 40
(E) 50

33. If a and b are positive integers and $a^3 b^2 = 72$, then a + b =
(A) 36
(B) 17
(C) 8
(D) 6
(E) 5

34. Which of the following fractions is closest to 1 given that a > b > 1?

(A) $\frac{a}{b}$

(B) $\frac{(a+2)}{(b+2)}$

(C) $\frac{(a+1)}{(b+1)}$

(D) $\frac{(a+1)}{b}$

(E) $\frac{(a-1)}{(b-1)}$

35. If I invest N2000 at x% and N2500 at y%, my annual income is N160. If I had invested N2,500 at x% and N2000 at y%, my income would have been N155. Find x and y.
(A) 2, 3
(B) 3, 4
(C) 4, 5
(D) 5, 6
(E) 6, 7

36. If cylinder A has three times the height and one-third the diameter of cylinder B, what is the ratio of the volume of A to the volume of B? (Volume of cylinder = $\pi r^2 h$)
(A) 3 : 1
(B) 1 : 1
(C) 1 : 3
(D) 1 : 9
(E) 1 : 27

37. A jogger desires to run a certain course in 1/4 less time than she usually takes. By what percent must she increase her average running speed to accomplish this goal?
(A) 20%
(B) 25%
(C) 33 1/3%
(D) 50%
(E) 75%

38. If *a* is a positive integer and if remainders of 4 and 6 are obtained when 89 and 125, respectively, are divided by a , then a =
(A) 7
(B) 9
(C) 15
(D) 17
(E) 19

39. A pen- and - pencil set costs N12, the same as when the items are bought separately. If the pen costs N11 more than the pencil, what is the cost of the pencil?
(A) N0.50
(B) N1.00
(C) N1.50
(D) N6.00
(E) N11.00

40. A salesman makes a commission of x percent on the first N2,000 worth of sales in any given month and y percent on all further sales during that month. If he makes N700 from N4,000 of sales in October and he makes N900 from N5,000 of sales in November, what is the value of x?
(A) 2%
(B) 5%
(C) 10%
(D) 15%
(E) 20%

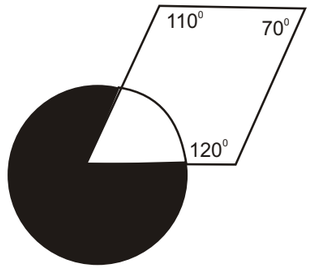
41. If 20 liters of chemical X are added to 80 liters of a mixture that is 10% chemical X and 90% chemical Y, then what percentage of the resulting mixture is chemical X?
(A) 15%
(B) 28%
(C) 33 1/3%
(D) 40%
(E) 60%

42. A merchant makes a profit of N10 on a certain item. If the naira cost of the time is a whole number, then which of the following could NOT represent her profit as a percentage of her cost?
(A) 10%
(B) 20%
(C) 25%
(D) 40%
(E) 80%

43. If x is an even number, which of the following must be odd?
I. 3x + 1
II. $(5x)^2 + 2$
III. $(X + 1)^2$
(A) I only
(B) III only
(C) I and II only
(D) I and III only
(E) I, II and III

44. Sixteen cylindrical cans, each with a radius, of 1 inch, are placed inside a rectangular cardboard box . If the cans touch adjacent cans and /or the walls of the box which of the following could be the interior area of the bottom of the box, expressed in square inches?
(A) 16
(B) 32
(C) 64
(D) 128
(E) 256

45. Mr. Femi Adebayo invested a total of N12,000 for a one-year period. Part of the money was invested at 5% simple interest, and the rest was invested at 12% simple interest. If he earned a total of N880 in interest for the year, how much of the money was invested at 12%?
(A) N1,920
(B) N4,000
(C) N4,800
(D) N7,200
(E) N8,000



46. In the figure above, the circle O has a radius of 6. What is the area of the shaded portion of the figure.
(A) $\frac{\pi}{2}$
(B) $\frac{5\pi}{2}$
(C) 12π
(D) 18π
(E) 30π

47. If during a one-year period, the dividend paid on a certain share of stock was equal to $8\frac{3}{8}\%$ of the par value of the stock, then the dividend paid was what fraction of the par value of the stock?
(A) $\frac{32}{800}$
(B) $\frac{67}{800}$
(C) $\frac{32}{100}$
(D) $\frac{67}{100}$
(E) $\frac{72}{100}$

48. If a machine consumes k/5 kilowatts of power every t hours, how much power will three such machines consume in 10 hours?
(A) $\frac{6t}{k}$
(B) $\frac{t}{k}$
(C) 30kt
(D) $\frac{k}{t}$
(E) $\frac{6k}{t}$

49. Machine P can produce x beads in 10 hours, Machine Q can produce x beads in 6 hours, and Machine R can produce 2x beads in 15 hours. If the three machines work together but independently, without interruption, how much time, expressed in hours, will be needed for them to produce 5x beads?
(A) $7\frac{2}{3}$
(B) 8
(C) 2
(D) 12½
(E) $23\frac{1}{2}$

50. A motorist travels 15km to the liter of petrol and 600km to the litre of oil. He estimates that an annual distance of 6000km will cost him N204 in petrol and oil. In fact he used twice as much oil as he estimated and the cost was N216. What is the cost of a litre of petrol?
(A) 48
(B) 120
(C) 96
(D) 24
(E) 60

51. A certain machine processes 8 quarts of milk every 6 seconds. How many gallons of milk can the machine process in 3 minutes?
(A) 18
(B) 20
(C) 60
(D) 75
(E) 120

52. During a half-price sale, Ms. Phyl bought a toothbrush for the usual price a second toothbrush for one-half the usual price. If she paid N1.80 for the two toothbrushes, what was the usual price of a toothbrush?
(A) N.50
(B) N.60
(C) N.90
(D) N1.20
(E) N2.40

53. For which of the following lengths of a side of a square would the perimeter be divisible by both 4 and 7?
(A) 3
(B) 4
(C) 5
(D) 6
(E) 7

54. Of 24 children on a tennis coaching course, 14 are boys and 8 are left handed, including 5 of the boys. No child is ambidextrous. What is the probability that a child selected at random is a left-handed girl?
(A) 7/24
(B) 5/12
(C) 1/8
(D) 3/8
(E) 7/12

55. In a certain year, corporation X produced 40 percent of the total world production of a certain drug. If corporation X produced 18 kilograms of the drug, how many kilograms were produced by producers other than corporation X?
(A) 22
(B) 27
(C) 36
(D) 40
(E) 45

56. Four cylindrical cans each with a radius of 2 inches are placed on their bases inside an open square pasteboard box. If the four sides of the box bulge slightly, which of the following could be the internal perimeter of the base of the box, expressed in inches?
(A) 64
(B) 32
(C) 30
(D) 20
(E) 16

57. A certain liquid fertilizer contains 10 percent mineral X by volume. If a farmer wishes to treat a crop with 3/4 of a liter of mineral X per acre, how many acres can he treat with 300 liters of the liquid fertilizer?
(A) 40
(B) 24
(C) 18
(D) 16
(E) 12

58. Three athletes A, B and C are to ran a race. B and C have equal chances of winning but A is twice as likely to win as either. What is the probability of each athlete winning?
(A) 2/3
(B) 1/3
(C) 3/4
(D) 1/4
(E) 3/5

59. Two security lights, L_1 and L_2, are located 100 feet apart. Each illuminates an area of radius 100 feet, and both are located 60 feet from a chain-link fence. What is the total length of fence, in feet, illuminated by the two lights?
(A) 260
(B) 240
(C) 220
(D) 200
(E) 180

60. A racetrack bounded by two concentric circles, one with a diameter of 160 yards and the other with a diameter of 140 yards, is to be covered with asphalt. If the asphalt layer is to be 1 foot deep, how many cubic yards of asphalt will be needed?
(A) 75π
(B) 90π
(C) 500π
(D) 1500π
(E) 2000π

61. If m, n, o and p are real numbers, each of the following expressions equals m(nop) EXCEPT.
(A) (op) (mn)
(B) ponm
(C) p(onm)
(D) (mp) (no)
(E) (mn) (mo) (mp)

62. To go to office in the morning . I first walked to the bus stop at 8km/h and enter okada for the rest of the way at 40km/h. It normally takes me 21 min in all. One morning when I was late, I ran to the bus stop at 16km/h and took okada at 60km/h. I completed the journey in $11^1/_2$min. How far is the bus stop from my office?
(A) 6
(B) 4
(C) 3
(D) 10
(E) 9

63. A merchant sells a radio for N80, thereby making a profit of 25% of the cost. What is the ratio of cost to selling price?
(A) 4/5
(B) 3/4
(C) 5/6
(D) 2/3
(E) 3/5

64. How many degrees are between the hands of a clock at 3 : 40?
(A) 150^0
(B) 140^0
(C) 130^0
(D) 125^0
(E) 120^0

65. If $mp + nq = 12mq$, and $mq > 0$, then $\frac{p}{q} + \frac{n}{m} = ?$
(A) 12
(B) $12mn$
(C) $12m + 12q$
(D) 0
(E) $mp = nq$

66. A perfect number is one which is equal to the sum of all its positive factors that are less than the number itself. Which of the following is a perfect number?
(A) 1
(B) 4
(C) 6
(D) 8
(E) 10

67. A class begins at 1:21 p.m and ends at 3:36 p.m the same afternoon. How many minutes long was the class?
(A) 4587
(B) 215
(C) 150
(D) 135
(E) 75

68. In the square above with side 4, the ratio $\frac{\text{area of shaded region}}{\text{area of unshaded region}} =$
(A) $\frac{2 + x}{4}$
(B) $\frac{4 + x}{8}$
(C) 2
(D) $\frac{4 + x}{4 - x}$
(E) 2x

69. A carpenter needs four boards, each 2 feet 10 inches long. If wood is sold only by the foot, what is the minimum length, in feet, of wood the carpenter must buy?
(A) 9
(B) 10
(C) 11
(D) 12
(E) 13

70. Ned is two years older than Mike, who is twice as old as Linda. If the ages of the three total 27 years, how old is Mike?
(A) 5 years
(B) 8 years
(C) 9 years
(D) 10 years
(E) 12 years

ANSWER KEY

1.	C	11.	C	21.	A	31.	A	41.	B	51.	A	61.	E		
2.	D	12.	A	22.	C	32.	D	42.	E	52.	D	62.	B		
3.	D	13.	C	23.	D	33.	E	43.	D	53.	E	63.	A		
4.	E	14.	D	24.	E	34.	B	44.	C	54.	C	64.	C		
5.	A	15.	D	25.	C	35.	B	45.	B	55.	B	65.	A		
6.	D	16.	A	26.	E	36.	C	46.	E	56.	C	66.	C		
7.	B	17.	E	27.	B	37.	C	47.	B	57.	A	67.	D		
8.	B	18.	C	28.	C	38.	D	48.	A	58.	D	68.	D		
9.	E	19.	C	29.	D	39.	A	49.	D	59.	A	69.	D		
10.	A	20.	A	30.	B	40.	D	50.	E	60.	C	70.	D		

ANSWERS AND EXPLANATIONS

1. C Let the age of the wife = 50 yrs
the husband's age = $\frac{100 + 10}{100} \times 50$
= 55yrs
difference in age = (55 - 50) yrs = 5yrs
= $\frac{5}{55} \times 100\%$
= 9.09%

2. D Let the cost price for A = N50
the cost price for B = $\frac{120}{100} \times 50$
= N60
B sold to C at N50
Loss = N60 - N50 = N10
percentage loss for B = $\frac{10}{60} \times 100\%$
= $16^{2}/_{3}\%$

3. D Let the price before the rise = N50
therefore 25% rise = $\frac{125}{100} \times 50$
= N62.5
A fall of 25% = $\frac{75}{100} \times$ N62.5
= N46.875
Difference in price = N50 - N46.875
from initial price = N3.125
percentage fall = $\frac{3.125}{50} \times 100\%$
= $6^{1}/_{4}\%$ fall

4. E Let the initial price = N50.00
A gain of 35% = $\frac{135}{100} \times 50$
= N67.50
A discount of 10% = $\frac{90}{100} \times$ N67.50
= N60.75
Gain = N60.75 - N50.00
= N10.75
Gain percent = $\frac{10.75}{50} \times 100$
= 21.5%

5. A Score = 20
Sold = $\frac{90}{100} \times 20$
= 18
The man sold 12 for 60k
and 6 for 30k
18 eggs was sold for = 90k
Gain = 90k - 55k
= 35k
Profit percent = $\frac{35}{55} \times 100\%$
= 63.6%

6. D Let initial distance traveled = A km
Let initial price of petrol = B kobo per litre
His initial bill was AB, and let M = number of Km traveled per litre of petrol.
New distance = $\frac{100 - x}{100} \times A$
New price = $\frac{100 - y}{100} \times B$
New annual bill = $\frac{(100-x)(100-y)}{100 \times 100} \times \frac{AB}{M}$
= $1 + \frac{y-x}{100} - \frac{xy}{1000}$
= $(y - x - \frac{xy}{100})\%$

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7. B Let the total number of books = 50
At a profit of 20% the selling price of a copy of book = 90k
therefore the cost price = $\frac{100}{120} \times 90$ = 75k
But on 90% of the total books was sold for 90k each = $\frac{90}{100} \times 50$
= 45 x 90k
= N40.50
and the remaining 10% was sold for 60k each
= $\frac{10}{100} \times 50$
= 5 x 60
= N3.00
Total sales = N40.50 + N3.00

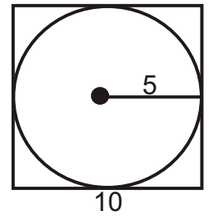
= N43.50
Profit = N43.50 - (75k x 50)
= N43.50 - N37.50
= N6.00
Percentage profit = $\frac{6}{37.5} \times 100$
= 16%

8. B The selling price percentage at N5.35
= 100% + 7%
= 107%
the selling price percentage for a profit percent of 15% = 100% + 15%
= 115%
the selling price at 15% = $\frac{115}{107} \times 5.35$
= N5.75

9. E Let the cost price of the wholesaler = N50
the cost price of the retailer = selling price of the wholesaler
= $\frac{120}{100} \times 50$
= N60
the retailer's selling price = $\frac{180}{100} \times 50$
= N90
profit of the retailer = N90 - N60
= N30
percentage profit = $\frac{30}{60} \times 100$
= 50%

10. A Let the price of each egg = N20
therefore 12 eggs = N20 x 12
= N240
cost of 20 eggs = N20 x 20
= N400
profit = N400 - N240
= N160
percentage profit = $\frac{160}{240} \times 100$
= 66.67%

11. C



Let the radius of the circle = 5cm
therefore the one side of the square = 10cm.
Area of circle = 3.142 x 5x 5
= $78.55cm^2$
Area of square = 10 x 10
= $100cm^2$
$\frac{78.55}{100} \times 100\%$
= 78.55%

12. A Let the distance = 50 km
Let the time = 5 hrs
Speed = $\frac{50}{5}$
= 10km/hr
75% of the scheduled time = $\frac{75}{100} \times 5$
= 3.75hrs
Difference in speed = 13.33 - 10
= 3.33
Percentage increase = $\frac{3.33}{10} \times \frac{100}{1}$
= $33^{1}/_{3}\%$

13. C Since there are four biros, and the biro used a day should differ from that of the previous day. In order words there is a differential choice of 2 units for each day. Therefore, take the biros as a binary code and convert it to decimal code.
$1111_2 = 1 \times 2^3 + 1 \times 2^2 + 1 \times 2^1 + 1 \times 2^0$
= 8 + 4 + 2 + 1
= 15

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14. D The time spent by Chidi = 3 hrs
the rate of Chidi = 1/3
= 0.33

time spent by Peter = 4
the rate of Peter = ¼
= 0.25
the time spent by Peter's son = 8
the rate of Peter's son = 1/8
= 0.125

sum of the rates = 0.33 + 0.25 + 0.125
= 0.708

Amount received by Peter's son
$= \frac{0.125}{0.708} \times 8.5$
= N1.50

15. D Let the age of C = s yrs
:- B's ages $= \frac{3}{2}s$

:- A's age $= \frac{9}{4}s$

$S + 3/2s + 9/4s = 114$

$\frac{4s + 6s + 9s}{4} = 114$

$19s = 456$
$S = 24$
:- A's age = 24 x 9/4
= 54 yrs

16. A
$400 \times \frac{9}{12} = 300$

$300 \times \frac{8}{12} = 200$

:- Ann will receive $= \frac{300}{500} \times 25$
= N15

17. E
$x : y = 3^1/_2 : 2^1/_3$, $y : z = 1^1/_4 : 2^1/_7$

$x : y \quad\quad y : z$

$3^1/_2 : 2^1/_3 \quad\quad 1^1/_4 : 2^1/_7$

$= 1^1/_4(3\frac{1}{2}) : 1^1/_4(2^1/_3) \quad 2^1/_3(1^1/_4) : (2^1/_7)2^1/_3$

$\frac{35}{8} : \frac{35}{12} \quad\quad \frac{35}{12} \quad\quad \frac{15}{3}$

Since y is common on both sides, so we choose only one value of y.

:- $\frac{35}{8} : \frac{35}{12} : \frac{15}{3}$

Now multiply through by 1/35
Answer will be $\frac{1}{8} : \frac{1}{12} : \frac{1}{7}$
Now multiply through by 672 (8 x 12 x7)
Answer = 21 : 14 : 24

18. C
Let the interest be = N100
30% of the profit = N30
:- the remaining N70 will be shared in the ratio in the capital invested.

:- for Silas $= \frac{3000}{4800} \times 70$
$= 43\,^3/_4\%$

19. C
The selling price of the publisher
$= \frac{115}{100} \times 5000$
= 5,750

The selling price of the bookseller
= 4000 x 2.10 = 8,400

Profit = 8,400 - 5,750 = 2650
:- $\frac{2650}{8,400} \times 100$
= 31.5%

20. A
$\frac{115}{100} \times 22,000$
= N25,300

21. A The investigator drove the car for four days at N10 per day, which is N40; N40 subtracted from the total charge of N200 leaves N160, the portion of the total charge that was expended for the miles driven. This amount divided by the charge per mile (160/.20) gives the number of miles (800) driven by the investigator. The computation is:
4(10)+.20x=200

22. C
$\frac{1}{6} + \frac{1}{4}$
$= \frac{2+3}{12}$
= 5/12
Average $= \frac{5}{12} \times \frac{1}{2}$
= 5/24

23. D The cost of the switch after the government discount of 10%
18 -(18 x 0.10), or N16.20. This amount, when subtracted from the total charge of N49.20 leaves N33, which represents the charge for labor. A charge of N33 at the rate of N22 per hour represents 1.5 hours, or 1 hour 30 minutes of work.

24. E
Expected cost per tyre = 80/2 = 40
Actual cost = 34
Difference = 40 -34 = 6
% saved $= \frac{6}{40} \times 100\%$
= 15%

25. C
Let total number of people = x
Agency A = x/2
Agency B = x/3
Agency C = 3
:- $\frac{x}{2} + \frac{x}{3} + 3 = x$

$\frac{3x + 2x + 18}{6} = x$
$5x + 18 = 6x$
$x = 18$

26. E The correct answer is not given as one of the response choices. The answer can be obtained by first converting 12 minutes to 0.2 hour, and then setting up a simple proportion:

$\frac{2.2}{4} = \frac{x}{16}$
Solving this proportion, we obtain 4x = 35.2; x = 8.8. However, this is the number of hours that it would take one filing clerk to do the job. If two clerks are filing the 16 drawers, the job would be completed in half that time, or in 4.4 hours, which is 4 hours and 24 minutes

27. (B)
Let no of all patients = x
Additional average = 50% of x
= 0.5x
Cost = N40x + N20 (0.5x)
= 40x + 10x = 60,000
50x = 60,000
x = 1,200

28. (C) Obtain the correct answer by setting up a simple proportion:
$\frac{110km}{60\,min} - \frac{33km}{x\,min}$
Solving this proportion, we obtain
x = 1980/110 = 18mins.

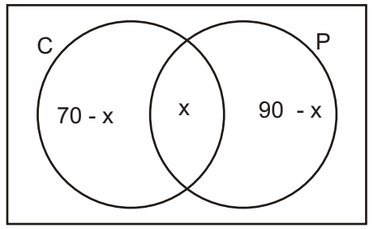
29. (D)

No of Job(s)	No of typist(s)	Time (hrs)
1	2	24
1	1	48
2	1	96
2	x	8

Inverse variation
8 x
96.....1
:- 8x = 96
x = 12 typists

30. (D)
Let gross pay = x
82% of x = 6.97 (discount pay)
:- x = 8.50
Hours of work $= \frac{1200}{40} = 30$
:- N8.50 x 30
= N255

31. A
$\frac{x + y + 30}{3} = 10$
$x + y + 30 = 30$
$x + y = 0$
Average of x and y
$\frac{x+y}{2} = 0$



32. D x = No of seniors in both club
70 - x = No of seniors in chess club only
90 - x = No of senior in pep club only
:- 70 - x + x + 90 - x = 120
x = 120 - 160
x = 40
There are 40 students in both clubs.

33. E This problem has a certain trial and error aspect to it. We need to find a pair of factors of 72 such that one of them is a perfect square and the other is a perfect cube. 72 is 9 x 8, and 9 is 3 squared and 8 is 2 cubed, so a is 3 and b is 2. Thus, a + b is 5.

34. B This is an example of a problem whose exact nature is not fully known until the answer choices are examined. Here, a simplifying approach is to choose convenient values for a and b and then evaluate the fractions, picking the fraction nearest to 1 as the answer. Let us work with a = 3 and b = 2, since a must be greater than b. Then answer choice (A) becomes 3/2, or 11/2. (B) becomes 5/4 or 11/4. (C) becomes 4/3, or 11/3. (D) becomes 4/2, or 2. Finally, (E) becomes 2/1, or 2. All of the answer choices are greater than one, and (B), which is the least of them, is therefore closest to 1.

35. C

$$2000x + 2500y = 160$$
$$2500x + 2000y = 155$$

Solving by dividing through with 100

$$20x + 25y = 1.6 \quad \text{.....(1)}$$
$$25x + 20y = 1.55 \quad \text{.....(2)}$$

Multiply equation (1) by 20 and equation (2) by -25

$$400x + 500y = 32$$
$$-625 + 20y = -38.75$$
$$-225x = -6.75$$

:- $x = \frac{6.75}{225} = 0.03$

$20y = 1.55 - 25 \times 0.03 = 0.8$

$y = \frac{0.8}{20} = 0.04$

Therefore, multiply x and y by 100
:- x = 3, y = 4

36. C
Volume of cylinder $= \pi r^2 h$
Cylinder A $= \pi x(1/3r)^2 \times 36$
$= 1/3\ \pi r^2 h$
Cylinder B $= \pi r^2 h$
:- Ratio $= \frac{1/3\ \pi r^2 h}{\pi r^2 h}$
$= 1/3$
$= 1:3$

37. C Let us call the jogger's original rate r_1 and her increased rate r_2. If the original time is t, then the new time would be 3/4t. Since the distance is the same in both cases, $D = r_1 t$
$= r_2 \left(\frac{3}{4}t\right)$ or $r_2 = \frac{4}{3} r_1$. The increase in speed would be $\frac{4}{3} r_1 - r_1 = \frac{1}{3} r_1$. Dividing this by the old total gives us the percentage increase:

$$\frac{\frac{1}{3} r_1}{r_1} = \frac{1}{3} = 33^1/_3\%$$

38. D if a remainder of 4 is obtained when 89 is divided by a, then a must divide 89 - 4 = 85 evenly. Similarly, if a remainder of 6 is obtained when 125 is divided by a then a must divide 125 - 6 = 119 evenly. 85 is 17 x 5 and 119 is 17 x 7. The only integer that divides both numbers evenly is 17, so that is the correct answer.

39. A It is easy to misread this problem. It states that the pen costs N11 more than the pencil, not that the pen costs N11. Letting x = the cost of the pen and y = the cost of the pencil, we can write two equations: x + y = 12 and x - y = 11. Subtracting the second equation from the first we get 2y = 1 and y = .50.

40. D The October commission can be expressed as $\left(\frac{x}{100}\right)(2000) + \left(\frac{y}{100}\right)(4000-2000)$ which must equal 700. This simplifies to 20x + 20y = 700. The November commission can be written as
$\left(\frac{x}{100}\right)(2000) + \left(\frac{x}{100}\right)(5000 - 2000) = 900$,
Which simplifies to 20x + 30y = 900. Subtracting the first equation from the second, we get 10y = 200 or y = 20. Subtracting for y in the first equation we get 20x + (2)(20) = 700, 20x = 300 or x = 15.

41. B You don't need any fancy formulae to attack this problem. If we start with 80 liters of a mixture that is 10% X and 90% Y, we have 8 liters of X, we end up with 28 liters of X and 72 liters of Y, for a total of 100 liters of the mixture. Since 28 out of the 100 liters of mixture are X, we have a mixture that is 28 or 28% X.

42. E

N10/cost x 100 = x%

This we can rewrite as:

N10(100)/x% = cost

Or as:

N10/x = cost

When x now represents the decimal equivalent of a percentage. So to determine whether an answer choice is possible, you need only substitute the decimal equivalent in for x: for example, (A):

N10/.10 = N100

Which says that profit of N10 on top of a cost of N100 would be a 10% profit. Since the N100 is a whole naira amount, (A) is possible.

The correct choice is (E)

$\frac{N10}{80}$ = N12.50

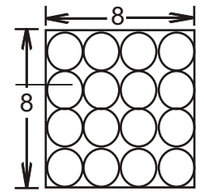
But N12.50 is not whole naira value.

43. D As for I, since x is even, 3x must also be even, and 3x + 1 an odd number.

As for II, since x is even 5x must be even: and since 3x is even, 5x times 5x is even, and an even number plus 2 is still even.

As for III, since x is even, x + 1 is odd that x + 1 times x + 1 is also an odd number.

44. C A picture should make clear the solution to the problem:



The box has inside dimension of 8 and 8, so the area is 8 x 8 = 64 square inches.

45. B
This question can be solved using simultaneous equations. For example, let x be the amount of money invested at 5% and let y be the amount of money invested at 12%. Using those symbols, since the total amount invested was N12,000, we write:

x + y = N12,000

Next, we know that the interest earned on x (at the rate of 5% per year) plus the interest earned on y (at the rate of 12% per year) was a total of N880 in interest:

X(.05) + y(.12) = N880

So we have two equations:

x + y = 12,000
.05 + .12y = 880

We can solve for each variable by the following method. First, since x + y = 12,000, x = 12,000 - y. We substitute that value of x into the second equation:

$.05\ (12{,}000 - y) + .12y = 880$
$600 - .05y + .12y = 880$
$0.7y = 280$
$Y = 4{,}000$

So the amount invested at 12% was N4,000.

46. E
Shaded Area = Area of Circle minus Unshaded Area

First, the area of the entire circle is πr^2 or 36 π. Next, the angle at the center of the circle belonging to the quadrilateral is 360^0, so the missing angle must be 60^0. And 60^0 is 1/6 of the total number of degrees in a circle, so the unshaded area is 1/6 the area of the circle, or 1/6 of 36 π, which is 6 π. Substituting into our solution statement.

$= 36\pi - 6\pi = 30\pi$

47. B
$$8\frac{3}{8}\% = \frac{8\frac{3}{8}}{100} = \frac{\frac{67}{8}}{100}$$
$$= \frac{67}{800}$$

48. E First, a single machine consumes k/5 kilowatts every t hours, which is a rate of, $\frac{k}{5t}$ Or $\frac{k}{5t}$. Next, we have three such machines, and they will consume at three times the rate of one machine: $\frac{3k}{5t}$. Finally, a direct proportion will show us how much is consumed in 10 hours:

$$\frac{3k}{5t} \quad \frac{x}{10}$$

Cross-multiply: $30k = (x)5t$

Divided by 5t: $\frac{30k}{5t} = x$

$\frac{6k}{t} = x$

49. D Rate (1) + Rate (2) + Rate (3) = Rate Combined
Amount: $\frac{x}{10} + \frac{x}{6} + \frac{2x}{15} = \frac{5x}{y}$
(Where y is the unknown time needed to answer the question).
Add: $\frac{3x+5x+4x}{30} = \frac{5x}{y}$

$\frac{12x}{30} \quad \frac{5x}{y}$

$y(12x) = 150x$

$y = \frac{150x}{12x} = 12.5$ hours

50. A Let the cost of petrol be x kobo and the cost of a litre of oil y kobo. In travelling 6000km, he estimates to use 400 litres of petrol and 10 litres of oil.
The cost of these is (400x + 10y) kobo
:- 400x + 10y = 20400
but he actually used twice as much oil = 20 litre
:- 400x + 20y = 21600

Solving both equation for x

400x + 10y = 20400
400x + 20y = 21600
x = 48

For more on this come to IEC seminar or lectures.

51. C Convert quartz to gallons and minutes to seconds. 8 quartz = 2 gallons
3 minutes = 180 seconds
Direct variation:
$\frac{2 \text{ gallons}}{6 \text{ seconds}} = \frac{x \text{ gallons}}{180 \text{ seconds}}$
$x = \frac{2 \times 180}{6}$
x = 60 gallons

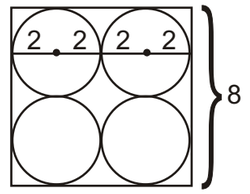
52. D Let usual price = x
:- ½ of usual price = x/2
:- x + x/2 = N1.80
$\frac{3x}{2}$ = N1.80
3x = N3.60
x = N1.20

53. E The most efficient way of attacking this question is to test each choice. (A), (B), (c), and (D) have perimeters of 12, 16, 20, and 24, respectively, numbers that are not divisible by both 4 and 7. (E), however, has a perimeter of 28, divisible by both 4 and 7, and that is the correct choice.

54. C Since there are 24 children, 14 of whom are boys, there must be 10 girls. Since 8 are left handed, including 5 boys, there must be 3 left handed girls.
The probability $= \frac{3}{24} = \frac{1}{8}$

55. B 40 percent of T = 18. So,
.4T = 18
t = 45

56. C A sketch of the bottom of the box may be helpful:



Since the radius of each can is 2, the diameter of each can is 4. If the cans fit exactly into the box, the box would have a side of 8 and a perimeter of 32. But we are told the box slightly bulged, so the inside perimeter must be slightly less than 32.

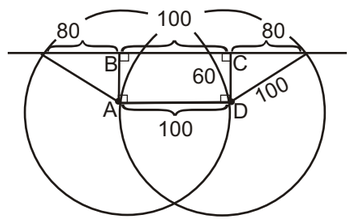
57. A We want to put 3/4 of a liter on each acre. So we need to divide:

$$\frac{30 \text{ liters}}{\frac{3}{4} \text{ liter/acre}}$$

$30 \text{ liters} \times \frac{4 \text{ acres}}{3 \text{ liters}} = 40 \text{ acres}$

58. D Since one runner is certain to win (ignoring ties), the probabilities must total 1. Since B and C are equally likely to win, their probabilities must be the same, say x.
Since A is twice as likely to win as either, his probability must be 2x.
:- x + x + 2x = 1
x = 1/4

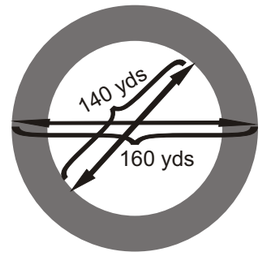
59. A Here it is useful to sketch some additional lines:



For convenience, we letter the points as shown. Now, ABCD is a rectangle. Since the two lights are 100 feet apart, BC is also 100. Then, we observe the sides are right triangles, the hypotenuses of which are radii and equal to 100. Since AB and CD are both 60, the one remaining side for each triangle is:

$X^2 + (60)^2 = (100)^2$
$x = 80$

You should have noticed the 3, 4, 5 relationship). So the total length is 80 + 100 + 80 = 260.



60. C The larger circle has a diameter of 160 yards, thus a radius of 80 yards and an area of π times $(80)^2$, or 6400 π square yards. The smaller has a diameter of 140 yards, thus a radius of 70 yards and an area of π times $(70)^2$, or 4900 π square yards. Subtracting the smaller area form the larger, we obtain 6400 π - 4900 π = 1500 π as the area of the track. Since the asphalt layer is to be 1 foot, or 1/3 yard, deep, we must multiply 1500 π by 1/3, getting 500 π cubic yards as the answer.

61. E multiplication is both associative and commutative. By associative, we mean that the grouping of the elements is not important for example, (5 x 6) x 7 = 5 x (6 x 7). By commutative we mean that the order of the elements is unimportant - for example, 5 x 6 = 6 x 5. S0 (A), (B), (C), and (D) are all alternative forms for m(nop), but (E) is not: $(mn)(mo)(mp) = m^3nop$.

62. B Let x = distance he walked
y = distance covered by okada

$\frac{x}{8} + \frac{y}{40} = \frac{21}{60}$ ..... (i)

$\frac{x}{16} + \frac{y}{60} = \frac{11.5}{60}$ ..... (ii)

Multiply equation (i) by 120 and equation (II) by 240

15x + 3y = 42
15x + 4y = 46

Eliminate x and solve for y
Y = 4

The office is 4km from the office

63. A Let x = the cost
Then $x + \frac{1}{4}x = 80$

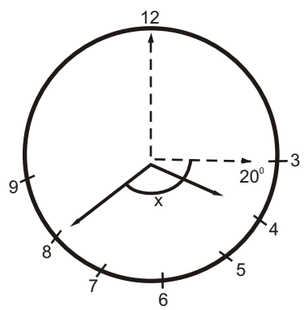
$4x + x = 320$

$5x = 320$

= N64 (cost)

Cost = 64
S.P 80

$= \frac{4}{5}$



64. C At 3:00, large hand is at 12 and small hand is at 3. During the next 40 minutes, large hand moves to 8 and small hand moves $\frac{40}{60} = \frac{2}{3}$ of the distance between 3 and 4. Since there is 30^0 between two numbers on a clock, $<x = 5(30^0) - 20^0 = 150^0 - 20^0 = 130^0$.

65. A

$\frac{p}{q} + \frac{n}{m} = x$

:- $\frac{mp + nq}{mq} = x$

$mp + nq = xmq$

If $mp + nq = 12mq$
:- $x = 12$

66. C Do not let the term "perfect number" throw you. Accept the definition of any such odd ball term and apply it to the problem. Since the factors of 6 less than 6 itself are 1, 2, and 3, 6 is the perfect number (1+2+3 = 6). 1 is not a perfect number since there are no factors of 1 less than itself. 4 is not a perfect number since the factors of 4 less than 4 are 1 and 2 and 1 + 2 4. Nor is 8 a perfect number since the factors of a 8 are less than 8 itself are 1, 2 , and 4, and those total 7, not 8. Finally, 10 is not a perfect number since the key factors here are 1,2, and 5, which total 8, not 10.

67. D From 1:21 to 2:21 is 60 minutes. From 2:21 to 3:21 is 60 minutes. So far we have a total of 120 minutes. Then, from 3:21, to 3:36 is 15 minutes, for a total of 135 minutes.

68. D Area of shaded area is equal to
Area of square - Area of unshaded triangle
Area of square = 4 x 4 = 16
Area of unshaded triangle = $\frac{1}{2} \times \frac{4}{1} \times 4 - x$

$= 8.2x$

:- Area of shaded area
= 16 - (8 .2x)
= 16 - 8 + 2x
= 8 + 2x

:- Ratio $= \frac{8 + 2x}{8 - 2x}$

$= \frac{4 + x}{4 - x}$

69. D To find the total wood needed, you must multiply 2 feet 10 inches by 4. Two feet times 4 is 8 feet. Ten inches times 4 is 40 inches, which is between 3 feet (36 inches) and 4 feet (48 inches). There is no way to get 40 inches of wood out of 3 feet. You should round up, so that there is enough wood and the answer is thus 8 feet plus 4 feet = 12 feet.

70. D
Let Linda's age = x
:- Mike = 2x
and Ned = 2x + 2
x + 2x + 2x + 2 = 27
5x = 25
x = 5
Mike's age = 2 x 5 = 10 years

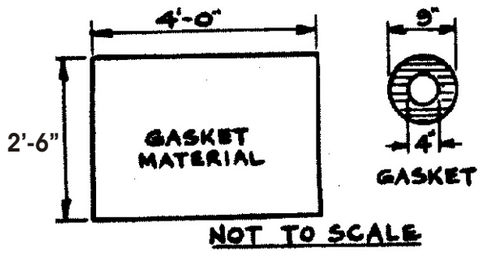
SHOP ARITHMETIC TEST I

21 QUESTIONS
15 MINUTES

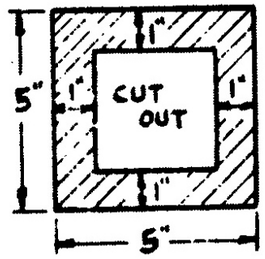
DIRECTIONS

For each question in this texts, carefully read the stem and the four lettered choices that follow. Choose the answer that you consider correct or most nearly correct. Mark the answer sheet for the letter you have chosen: A, B, C, or D. Check your answers with the correct answers at the end of this chapter.

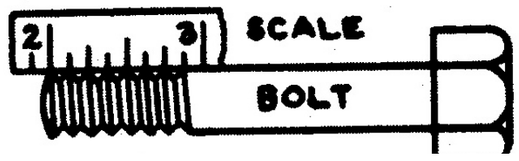
1. The maximum number of gaskets shown that can be cut from the gasket material as shown below is
   (A) 14
   (B) 15
   (C) 18
   (D) 20



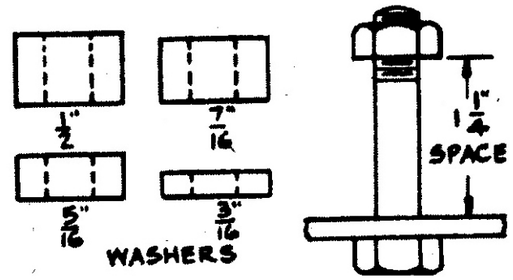
2 The gasket shown has an area of
   (A) 9 in.^{2}
   (B) 15 in^2
   (C) 16 in^2
   (D) 20 in^2



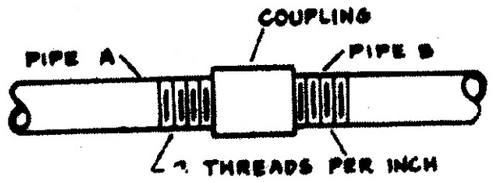
3. The number of threads per inch on the bolt is
   (A) 16
   (B) 10
   (C) 8
   (D) 7



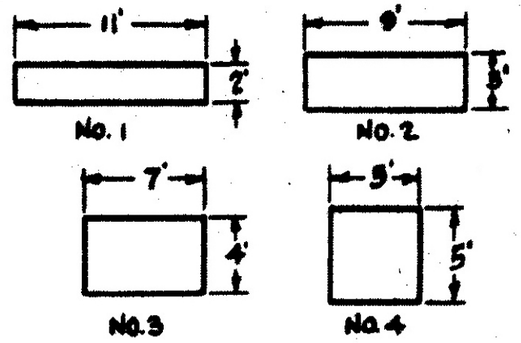
4 Using only the sizes of washers shown, the least number of washers needed to exactly fill the $1^1/_4$" space is
   (A) 6
   (B) 5
   (C) 4
   (D) 3



5. If both pipes A and B are free to move back and forth but are held so they cannot turn, and the coupling is turned 4 revolutions with wrench, the overall length of the pipes and coupling will
   (A) decrease 1/2"
   (B) remain the same
   (C) increase or decrease 1", depending upon the direction of turning
   (D) increase 1/2"

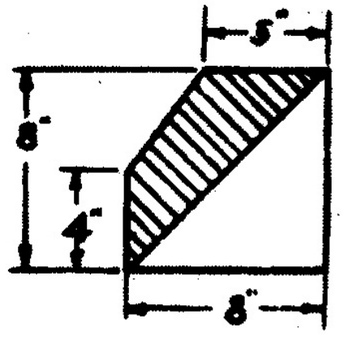


6. Shown are the bottoms of four bins that are used for storing materials. If the bins are all capable of holding the dame amount of any particular material, then you would expect the bin with the shortest sides to be the one whose bottom is shown as
   (A) No. 1
   (B) 2
   (C) 3
   (D) 4

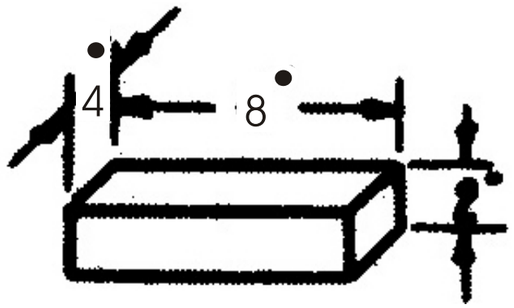


7. The volume (in cubic inches) of the bar is
   (A) 24 in^3
   (B) 28 1/4 in^3
   (C) 48 in^3
   (D) 60 in^3

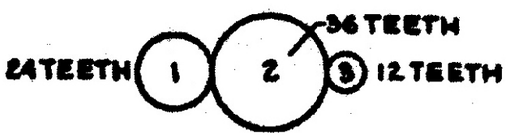
8. If the shaded portion is cut from the plate shown, the area of the remaining portion is
   (A) 26 in^2
   (B) 29 in^2
   (C) 32 in^2
   (D) 58 in^2



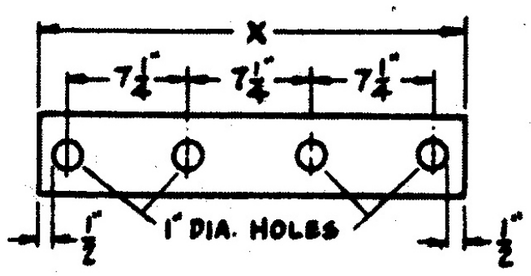
9. The approximate dimensions of a common brick are as shown. The volume of the brick is
   (A) 64 ft.^{3}
   (B) 5 1/3 ft.^{3}
   (C) 4/6 ft.^{3}
   (D) 1/27 ft.^{3}



10. When the RPM of gear #1 is 120, the RPM of #3 is
    (A) 40
    (B) 60
    (C) 180
    (D) 240

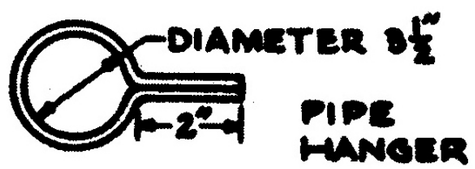


11. The dimension "x" on the piece shown is
    (A) 20 3/4"
    (B) 22 3/4"
    (C) 23 3/4"
    (D) 24 1/4"

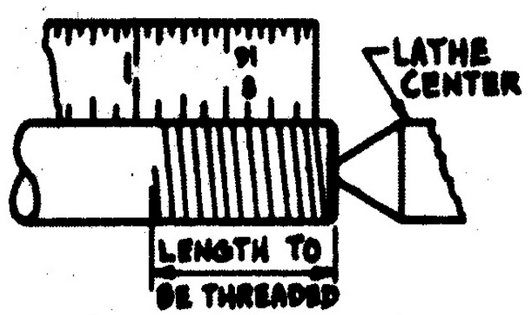


12. Five metal bars have lengths, measured it feet, of 4,4,3,4, and 10. The average (arithmetic mean) length is
    (A) 6.7 feet
    (B) 5 feet
    (C) 4 feet
    (D) 3.8 feet

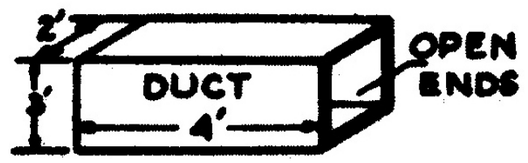
13. The minimum length of strap iron needed to make the hanger is most nearly
    (A) 26"
    (B) 15"
    (C) 13"
    (D) 9 ½"



14. A very light cut (trace) is being measured a s a check before cutting the thread on the lathe. The number of threads per inch shown is
    (A) 12
    (B) 13
    (C) 14
    (D) 15

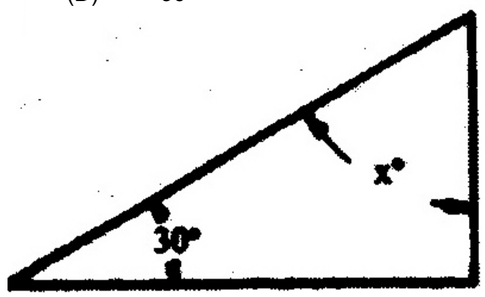


15. The minimum area of sheet metal strip required to make the duct (allowing 21/2% for joints) is
    (A) 24.6 ft.^{2}
    (B) 41 ft.^{2}
    (C) 42.5 ft.^{2}
    (D) 100 ft.^{2}

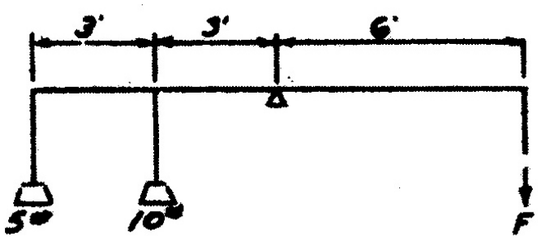


16. In a scale drawing where 1" = 1', 3/4" represents an actual length of
    (A) 3/4"
    (B) 3"
    (C) 8"
    (D) 9"

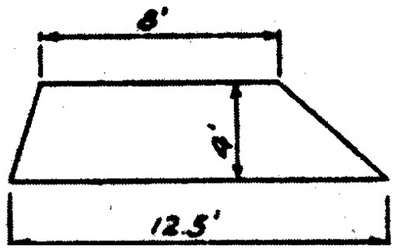
17. In the right-angled triangle shown, x is
    (A) 45°
    (B) 60°
    (C) 78°
    (D) 90°



18. The force F needed to balance the lever is most nearly
    (A) 7.5 lbs.
    (B) 10 lbs.
    (D) 12.5 lbs.
    (D) 15 lbs.

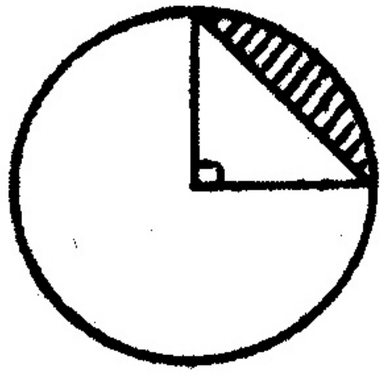


19. A drawing uses a scale of 1 inch to represent 10 feet. If a square on the drawing measures 5 in on a side, what is the actual area?
    (A) 50 ft.^{2}
    (B) 2500 ft.^{2}
    (C) 2500 in.^{2}
    (D) .25 ft.^{2}



20. The top and bottom sides of the figure shown are parallel. The area is most nearly
    (A) 40.5 ft^2
    (B) 41.0 ft^2
    (C) 41.5 ft.^{2}
    (D) 42.0 ft.^{2}

21. In the circle shown, the radius is 10'. The area of the shaded portion is most nearly.
    (A) 27.5 ft.^{2}
    (B) 28.0 ft.^{2}
    (C) 28.5ft.^{2}
    (D) 29.0 ft.^{2}



SHOP ARITHMETIC TEST 2

20 QUESTIONS
15 MINUTES

DIRECTIONS For each question in this test, carefully read the stem and the four lettered choices that follow. Choose the answer that you consider correct or most nearly correct. Mark the answer sheet for the letter you have chosen: A, B, C, or D. Check your answers with the correct answers at the end of this chapter.

1. The maximum number of 125 pound weights that can be safely lifted with a chain hoist of 1000 pound capacity is
   (1) 7
   (B) 8
   (C) 9
   (D) 10

2. The number 0.045 can also be expressed as
   (A) 45 tenths
   (B) 45 hundredths
   (C) 45 thousandths
   (D0 45 ten-thousandths

3. If one gallon of insecticide is needed to spray an area of 1200 square feet, the amount of insecticide needed for a 32 square yard area is most nearly
   (A) ½ pint
   (B) 1 pint
   (C) 1 quart
   (D) ½ gallon

4. If the recommended amount of naphthalene for use in closest is one ounce for each six cubic feet, then the amount needed for a closet 6 feet by 8 feet by 4 feet is
   (A) 1 pound
   (B) 2 pounds
   (C) 3 pounds
   (D) 4 pounds

5. Assume that a foreman has assigned six (6) men to do a certain job in four (4) days. Due to an emergency, the foreman can assign only two (2) men. Assuming that these two men work at the same speed, how many days will it take them to complete the job?
   (a) 1 1/3 days
   (B) 12 days
   (C) 16 days
   (D) 18 days

6. Assume that you, the foreman, must assign exterminators to service all of the apartments in a housing development in one week. Exterminators are scheduled to work five 7hour days in a week. If 140 hours are required to service this development, how many exterminators should be assigned?
   (A) 1
   (B) 2
   (C) 3
   (D) 4

7. The sum of 1'-9 3/4", 0'-2 7/8", 3'-0", 4'-6 3/8", and 7'-2 3/4" is
   (A) 16'-9 3/4"
   (B) 16' -9 1/4"
   (C) 16' -8 3/4"
   (D) 16' -8 1/4"

8. A crate contains 3 pieces of equipment weighing 73, 84, and 47 pounds respectively. If the crate is lifted by 4 men, each lifting one corner of the crate, the average number of pounds lifted by each of the men is
   (A) 51
   (B) 55
   (C) 61
   (D) 68

9. A slab of concrete is 126 feet long, 36 feet wide and 9 inches thick. Its volume, in cubic yards, is most nearly.
   (A) 28 yd^3
   (B) 42 yd^3
   (C) 126 yd^3
   (D) 84 yd^3

10. A pipe is laid on an upward slope of 1/4" vertical for each 1' horizontal. In a horizontal distance of 30 feet, the vertical distance the pipe rises is
    (A) $6\frac{7}{8}$"
    (B) 7 ½"
    (C) $7\frac{7}{8}$"
    (D) 8 ½"

11. A distance of $32\frac{7}{8}$" is most nearly
    (A) 2.54 ft.
    (B) 2.64 ft.
    (C) 2.74 ft.
    (D) 2.84 ft.

12. The sum of 5'-10 7/8", 17'-½",and 22'-7 1/16 is
    (A) 44'-5 5/16"
    (B) 45'-6 7/16"
    (C) 45'-8 1/16"
    (D) 46'-3 3/16"

13. The difference between 45'-6 ½"and 27'- 8 3/4" is
    (A) 18'-4 1/4"
    (B) 18'-2 3/4"
    (C) 17'-11 1/4'
    (D) 17'9 3/4"

14. The area of a circle 8 feet in diameter is most nearly
    (A) 45 $ft.^2$
    (B) 50 $ft.^2$
    (C) 55 $ft.^2$
    (D) 60 $ft.^2$

15. Sixty-two fittings, each weighing 268 pounds, are used on a job. If one ton equals 2,000 pounds, the total weight of the sixty-two fittings is most nearly.
    (A) 7.5 tons
    (B) 7.9 tons
    (C) 8.3 tons
    (D) 8.7 tons

16. Five and one-quarter present of N8,752.00 is
    (A) N457.35
    (B) N458.26
    (C) N459.48
    (D) N460.50

17. The Jaws of a vise close 3/16" for each turn of the screw. If the vise is open 3 inches, the number of turns needed to close the jaws completely is
    (A) 15
    (B) 16
    (C) 17
    (D) 18

18. A certain job, which took 12 days to 8 hours each to complete, required 6 workers at N4.80 per hour and a foreman whose salary is equivalent to N45.00 per day. The total labor cost for the job was.
    (A) N885.60
    (B) N1000.80
    (C) N2764.80
    (D) N3304. 80

19. A revolution counter applied to the end of a rotating shaft reads 200 when a stop-watch is started and 950 after 90 seconds. The shaft is rotating at a speed of
    (A) 500 RPM
    (B) 575 RPM
    (C) 750 RPM
    (D) 1150 RPM

20. Five equally spaced, one-inch diameter holes are to be drilled in a straight line in a steel plate. The distance between the centerline of the end holes is 12 inches. The distance between the centerline of two adjacent holes is
    (A) 1.00 inches
    (B) 2.00 inches
    (C) 2.40 inches
    (D) 3.00 inches

SHOP ARITHMETIC TEST 3

20 QUESTIONS

15 MINUTES

DIRECTIONS

For each question in this test, carefully read the stem and the four lettered choices that follow. Choose the answer that you consider correct or most nearly correct. Mark the answer sheet for the letter you have chosen: A, B, C, or D. Check your answers with the correct answers at the end of this chapter.

1. If a train on a certain route makes two round trips in 5 hours and 20 minutes, the average time for one round trip would be, in minutes
   (A) 100 minutes
   (B) 150 minutes
   (C) 160 minutes
   (D) 200 minutes

2. If 3 pieces fo wood, each 10 feet long, are to be cut into 3 foot lengths, the maximum number of 3 foot pieces of wood which can be obtained will be
   (A) 6
   (B) 8
   (C) 9
   (D) 10

3. A box contains 3 pieces of equipment weighing 43, 65 and 84 pounds respectively. If the crate is lifted by 4 men, each lifting one corner of the box, the average number of pounds lifted by each of the men is
   (A) 32
   (B) 40
   (C) 48
   (D) 64

4. The sum of 5 feet- 1 $^{1}/_{2}$ inches, 6 feet-2 3/4 inches and 6 $^{3}/_{4}$ inches is
   (A) 11'-10 $^{1}/_{4}$"
   (B) 11' - 11"
   (C) 12'-0"
   (D) 12'-2"

5. The material pass for a truck load of pipe valves refers to "one gross". The maximum number of valves permitted to go out of the yard in this truck is
   (A) 12
   (B) 72
   (C) 144
   (D) 240

6. The fraction 3/8 expressed as a decimal is
   (A) 0.125
   (B) 0.250
   (C) 0.333
   (D) 0.375

7. A pound of a certain type of metal washer contains 360 washers. If 1/4 of the material of each washer is removed by enlarging the centre of each washer, the number of washers to the pound should then be most nearly
   (A) 280
   (B) 300
   (C) 380
   (D) 480

8. A worker earns N5.42 per hour, and one half for overtime. Ten percent of his total salary earned is deducted from his pay check for Social Security and taxes. He also contributes N2.50 per week to a charitable organisation. No other deduction are made. If he works 2 hours over his basic 40 hours, his weekly take home pay should be most nearly
   (A) N233.06
   (B) N209.75
   (C) N207.25
   (D) N205.30

9. Assume that the average life of a pair of subway car wheels is 100,000 car-miles, and that 15,000 car miles are lost each time the wheels are turned in the lathe to make them suitable for use. If a certain pair of wheels has been sent to the shop for turning after 40,000 car-miles and again after 65,000 car-miles of operation, then the number of car-miles of operation remaining in the pair of wheels after the second wheel turning is
   (A) 0
   (B) 5,000
   (C) 20,000
   (D) 35,000

10. A car part costs N130 per 100 units if purchased from a vendor. The car part can be made on a machine that can be purchased for N1000. Assume that this machine has a production life of 20,000 units with no salvage value, and that all shop costs amount to N80 per 100 units turned out in the shop. The money that would be saved during the life of the machine would be
    (A) N 800
    (B) N8,000
    (C) N9,000
    (D) N18,000

11. The budget for a work unit was N1000.00 in 1971. Their 1972 budget was 5% higher than that of 1971, and their 1973 budget was 10% higher than that of 1972. The work unit's budget for 1973 is
    (A) N1,055
    (B) N1,115
    (C) N1,155
    (D) N1,205

12. Three pieces of machinery were recently purchased. One machine cost N1,739.55, the second machine cost N6,284.00. The total cost for all three machines was N12,721.00. How much did the third machines cost?
    (A) N4,607.55
    (B) N4,697.45
    (C) N4,797.55
    (D) N4,798.45

13. An emergency sanitation aide is paid at the rate of N2.40 per hour. He worked 45 hours in one week and was paid double time for 3 of the 45 hours worked during this week. What was his total gross earnings for the week?
    (A) N112.30
    (B) N115.20
    (C) N126.30
    (D) N155.20

14. A metal sheet is to have a row of ten holes drilled parallel to its length. The holes are to be 3 1/2" in diameter and spaced 5 ½" apart on centers. The distance from the edge of each end hole to the adjacent edge of the sheet is to be the same distance as the distance between the edges of the other holes. Based on this information, the sheet should have a minimum length of
    (A) 4'-8 3/4"
    (B) 4'-9"
    (C) 5'-6 1/2"
    (D) 5'-9 3/4"

15. It is required that a $1^{3}/_{4}$ inch-diameter shaft be machined to within a tolerance of plus or minus two-thousandths of an inch. The machined shaft will have to be rejected if it has a diameter of
    (A) 1.746 inches
    (B) 1.748 inches
    (C) 1.750 inches
    (D) 1.752 inches

16. A car part made by manufacturer "X" has a purchase cost of N7,500, and a life of 5 years; it requires a yearly maintenance cost of N50. Manufacturer "Y" offers a similar part of this type of N4,800, with a life of 3 years and a yearly maintenance cost of N75. By purchasing the part offering a better overall value, the yearly savings per unit purchased would be
    (A) N115
    (B) N125
    (C) N135
    (D) N140

17. A car part costs N150 per 50 units when purchased in a finished condition from a vendor. The car part can be made in the shop at a total cost of N2.20 per unit, when made on a machine that can be purchased for N1000. The minimum number of parts that must be made on this machine before the savings equal the cost of the machine is
    (A) 850
    (B) 1000
    (C) 1250
    (D) 1500

18. A shim pack is to be assemble having an overall thickness between the limits of 0.250" and 0.253". If individual shims are available in thickness of 0.005", 0.014", and 0.016", the minimum number of shims required to make up the assembly in any combination is
    (A) 18
    (B) 17
    (C) 16
    (D) 15

19. A subway car wheel wears such that the diameter is reduced from 34 inches to 33 ½ inches after 150,000 miles of operation. The rate of wear of the car wheel on the diameter is
    (A) 1/150 of an inch per 1,000 miles
    (B) 1/6 of an inch per 100,000 miles
    (C) 5/6 of an inch per 250,000 miles
    (D) 4/5 of an inch per 500,000 miles

20. A car part can be overhauled at the rate of 12 parts per hour. Each part requires new material costing N3 each. If the labor cost is N7 per hour, one part can be overhauled for a total cost (labor plus material) of most nearly
    (A) N3.32
    (B) N3.58
    (C) N3.73
    (D) N4.10

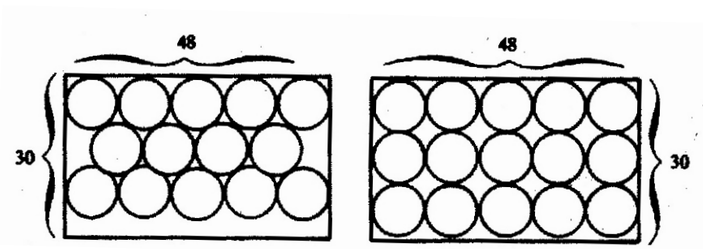
SHOP ARITHMETIC TEST 1

Correct Answers

1. B	4. D	7. C	10. D	13. B	16. D	19. B
2. C	5. B	8. C	11. C	14. B	17. B	20. B
3. C	6. C	9. D	12. B	15. B	18. B	21. C

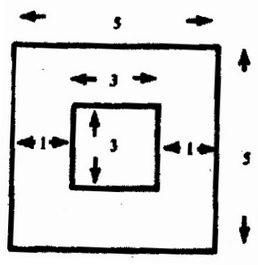
EXPLANATORY ANSWERS

1. B



Maximum is 15 gaskets.

2. C



$5^2 - 3^2 = 16 \text{ in.}^2$

3. C

$$\frac{7}{8} = \frac{x}{8}$$

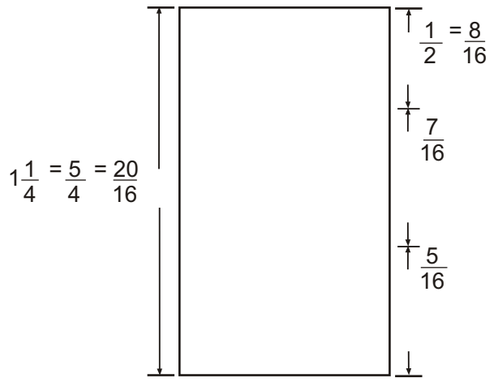
$$7 = \frac{7x}{8}$$

$$x = \frac{56}{7}$$

x = 8 threads

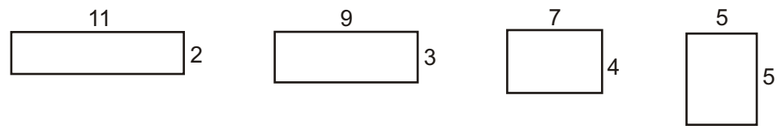
4. D

3. Washers



5. B The movement on one pipe is compensated for by the movement on the other pipe.

6. C Volumes are equal. The bin with the shortest sides has the greatest base area.

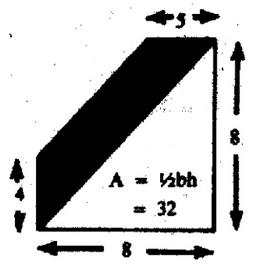


No. 1 A = bh = 22
No. 2 A = bh = 27
No. 3 A = bh = 28
No. 4 $A = s^2 = 25$

7. C $V = \left(\frac{3}{2}\right)(2)\ (8) + \left(\frac{3}{4}\right)(2)\ (16)$

v = 24 + 24
$v = 48 \text{ in}^3$.

8. C



$A = 32 \text{ in}^2$.

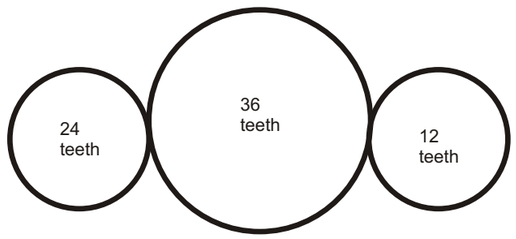
9. D $V = (4)\ (8)\ (2)\ in^3.$

$V = 64\ in^3.$

$V = \frac{64}{(12)\ (12)\ (12)}$

$V = \frac{1}{27}\ ft^3.$

10. D

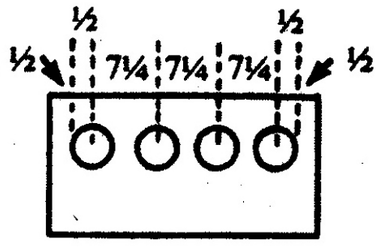


RPM varies inversely to the number of teeth.

$120\ (24) = (RPM)\ (12)$

$RPM = 240$

11. C



$x = \frac{1}{2} + \frac{1}{2} + 7\frac{1}{4} + 7\frac{1}{4} + \frac{1}{2} + \frac{1}{2}$

$x = 2 + 21\,^3/_4$

$x = 23\,^3/_4$"

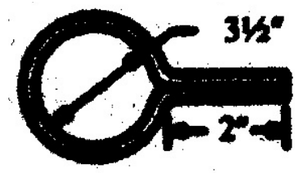
12. B Average $= \frac{\text{Sum of items}}{\text{Number of items}}$

Average $= \frac{4 + 4 + 3 + 4 + 10}{5}$

Average $= \frac{25}{5}$

Average = 5 feet

13. B



Diameter is $\frac{7}{2}$; radius is $\frac{7}{4}$

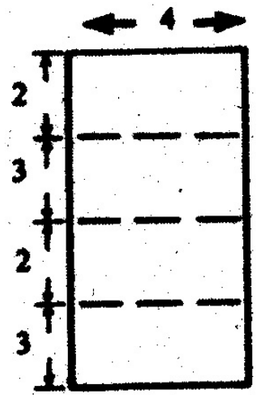
2 + 2 + Circumference

$4 + 2\left(\frac{22}{7}\right)\left(\frac{7}{4}\right)$

4 + 11 = 15
Length = 15"

14. B 13 threads

15. B



A = 8 + 12 + 8 + 12 = 40

$A = 40 + 2\,^1/_2\%$ of 40

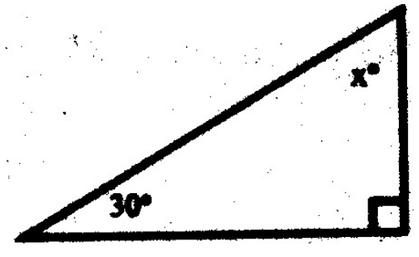
A = 1.025(40)

A = 41 ft^2.

16. D $\frac{1\text{ inch}}{1\text{ft.}} \quad \frac{3/4\text{ inch}}{x}$

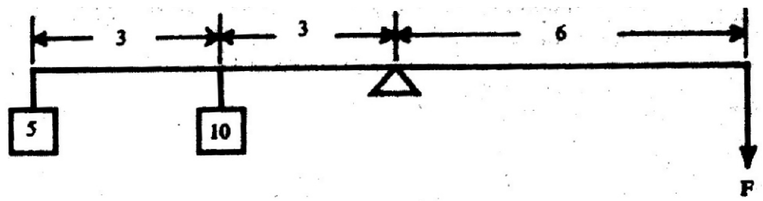
x = 3/4 ft
x = 9"

17. B



$x + 30 + 90 = 180^0$
$x = 60^0$

18. B



Clockwise moments = counter-clockwise moments

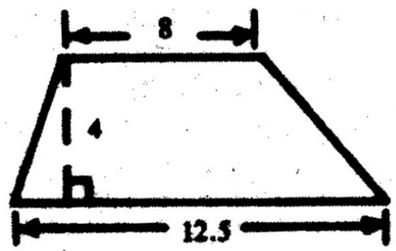
(f) (d) = (f) (d)
6F = 3 (10) + 6 (6)
6F = 60
F = 10 lbs

19. B 1 inch : 10 feet
$(1 \text{ inch})^2$: $(10 \text{ feet})^2$ 1 in^2. = 100ft^2
A square 5 in. X 5 in. has 25 in^2

$$\frac{1 \text{ in.}^2}{100 \text{ ft.}^2} = \frac{25 \text{ in.}^2}{x}$$

$x = 2500 \text{ft.}^2$

20. B



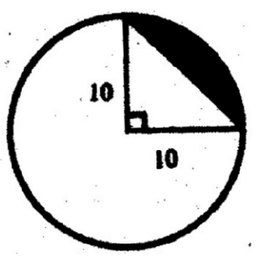
$$A = h\left(\frac{b1 + b2}{2}\right)$$

$$A = 4\left(\frac{8 + 12.5}{2}\right)$$

$$A = 4\left(\frac{20.5}{2}\right)$$

$A = 41$

21. C



Shaded area = 1/4 circle area minus are of right triangle.

= 1/4 (πr^2) = 1/2 bh

$$= \frac{1}{4}\left(\frac{22}{7}\right)(10)^2 - 1/2(10)(10)$$

= 78.57 - 50 28.5

Shaded area 28.5ft^2.

SHOP ARITHMETIC TEST 2

Correct Answers

1. B	4. B	7. A	10. B	13. D	16. C	19. A
2. C	5. B	8. A	11. C	14. B	17. B	20. D
3. C	6. D	9. C	12. B	15. C	18. D	

Explanatory Answers

1. B $\frac{1000}{125} = 8$ weights

2. C .045 = $\frac{45}{1000}$ = 45 thousands

3. C $\frac{1 \text{ gallon}}{1200 \text{ ft.}^2} = \frac{x}{32 \text{ yrd.}^2} = \frac{x}{32(9) \text{ ft.}^2}$

$$\frac{1}{1200} = \frac{x}{32(9)}$$

12000x = 288
x = .24 1/4 gallon
x 1 quart

4. B $\frac{1 \text{ oz.}}{6 \text{ ft.}^3} = \frac{x}{6\ (8)\ (4)}$

6x = 6 (8) (4)
x = 32 oz.
x = 2 pounds

5. B $\frac{1 \text{ job}}{(6 \text{ men})\ (4 \text{ days})} = \frac{1 \text{ job}}{(2 \text{ men})\ (x \text{ days})}$

$$\frac{1}{24} = \frac{1}{2x}$$

X = 12 days

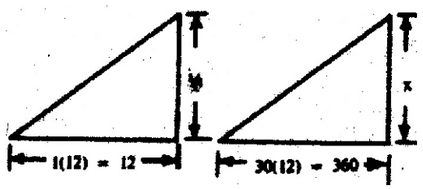
6. D Exterminator has 5 (7) = 35 hrs., needs 140 hrs.
$\frac{140}{35} = 4$

7. A
$$\begin{array}{r} 1\,\text{ft.} - 9.75'' \\ 2.875'' \\ 3\,\text{ft.} \\ 4\text{ft.} - 6.375'' \\ +\ 7\text{ft.} - 2.75'' \\ \hline 15\,\text{ft.} - 21.75'' \end{array} \quad 16'\text{-}9\,{}^{3}/_{4}''$$

8. A $\frac{73+84+47}{4} = \frac{204}{4} = 51$ pounds

9. C $(126\,\text{ft.})\ (36\,\text{ft.})\ (9\,\text{in.}) = \left(\frac{126}{3}\right)\left(\frac{36}{3}\right)\left(\frac{9}{36}\right)$ $\text{yd.}^3 = 126\,\text{yd}^3$.

10. B



$$\frac{12}{360} = \frac{\frac{1}{4}}{x}$$

$12x = 90$

$x = 7\frac{1}{2}''$

11. C $32\ 7\,\text{in.} = 32.875$
$\frac{}{8} \qquad \frac{}{12} \qquad 2.74\,\text{ft.}$

12. B
$$\begin{array}{r} 5\,\text{ft.} - 10.875\,\text{in.} \\ 17\text{ft.} - .5\,\text{in} \\ +\ 22\,\text{ft.} - 7.0625\,\text{in.} \\ \hline .\ 44\text{ft.} - 18{,}4375\,\text{in.} \end{array} \quad 45\,\text{ft.} - 7\,{}^{6}/_{16}\,\text{in.}$$

13. D
$$\begin{array}{r} 45\,\text{ft.} - 6.5\,\text{in.} \\ -\ \underline{27\text{ft.} - 8.75\,\text{in.}} \\ \end{array} \qquad \begin{array}{r} 44\text{ft.} - 18.5\,\text{in.} \\ \square\ 27\,\text{ft.} - 8.75\,\text{in.} \\ \hline 17\,\text{ft.} - 9.75\,\text{in} \end{array} = 17\,\text{ft.} - 9\,{}^{3}/_{4}\,\text{in.}$$

14. B $A = \pi r^2$
$A = \frac{22}{7}(4^2)$ 50
A $50\,\text{ft.}^2$

15. C $\frac{62(268)}{2000} = \frac{16616}{2000} = 8.3$ tons

16. C $5\,\frac{1}{4}\%\ (8752) = (.0525)\ (8752) =$ N459.48

17. B $\frac{\frac{3}{3}}{16} = \frac{48}{3} = 16$ turns

18. D

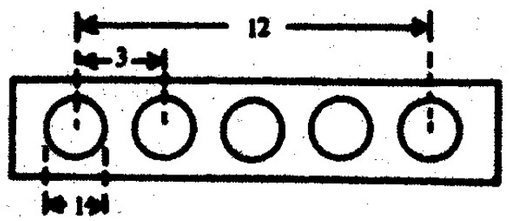
	workers	hours	rate		foreman rate	days
Cost =	(6)	((12 (8)	(4.80)	+	(45)	(12)

Cost = 2764.8 + 540
Cost = N3304.80

19. A $\frac{950 - 200\ \text{rev.}}{90\ \text{sec.}} = \frac{750\ \text{rev.}}{90\ \text{sec.}} \cdot \frac{60\ \text{sec.}}{1\ \text{min.}}$

$= 500\ \frac{\text{rev.}}{\text{Min.}}$
$= 500$ RPM

20. D



3.00 inches

SHOP ARITHMETIC TEST 3

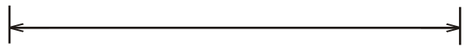
Correct Answers

1. C	4. B	7. D	10. C	13. B	16. B	19. C
2. C	5. C	8. C	11. C	14. B	17. C	20. B
3. C	6. D	9. B	12. B	15. A	18. C	

Explanatory Answers

1. C 5 hr. -20 min. = 320 min. $\frac{320}{2}$ = 160 minutes

2. C 3 | 3 | 3 | left over (10) Three 3 ft. Pieces per board.
(3 pieces per board) (3 board) = 9 pieces



3. C $\frac{43+65+84}{4} = \frac{192}{4}$ = 48 lbs.

4. B 5 ft. - 1.5”
6 ft. - 2.75”
\+ 6.75”
11ft. - 11”

5. C 1 gross = 144 valves

6. D 3/8 = .375

7. D if you remove 1/4 material then $\frac{\frac{3}{4}\text{ lb.}}{360} = \frac{1\text{ lb.}}{x}$

$x = 360\left(\frac{4}{3}\right)$

x = 480 washers

8. C $\frac{(5.42)\text{ (hrs.)} + (1.5)(5.42)\text{ (overtime hrs.)}}{\text{total earned}} - \frac{(10\%\text{ total earned})}{\text{S.S. and taxes}} - \frac{2.50}{\text{charity}}$
works 40 hours + 2 hours overtime

$\frac{(5.42\,(40) + (1.5)(5.42)(2)}{233.06} - (.10)(233.06) - 2.50 \quad 207.25$

9. B 1000, 000
\- 40,000 used
\- 15,000 turning
\- 25,000 additional used
\- 15,000 turning
5,000

10. C vendor: $\frac{130}{100\text{ units}}$ (120,000 units) = 26,000

Machine: 1000 + $\frac{80}{100\text{ units}}$ (20,000 units) = 17,000

N26,000
\- N 17,000
N 9,000

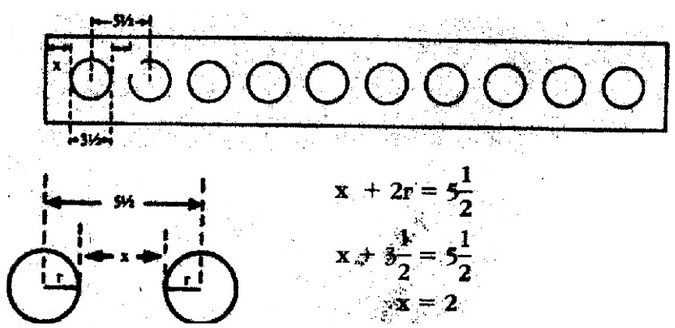
11. C 1971 1972
1.05 (1000) = 1050

1972 1973
1.1 (1050) = 1155 = N1,155

12. B 1,739.55 + 6,284 = N 8,023.55
12,721 - 8,023.55 = N 4,697.45

13. B (45 - 3) (2.40) + 3 2(2.40) = N115.20

14. B



Length = centre to centre first hole to last
+ half hole at each end
+ edge distance at each end

$$L = 9\left(5\frac{1}{2}\right) + 2\left(3\frac{\frac{1}{2}}{2}\right) + 2\,(2)$$

L = 57 in. $= \frac{57}{12}$ ft.
L = 4 ft. -9 in.
L = 4'-9"

15. A 1.75 - .002 x 1.75 + .002
1.748 x 1.752
1.764" is not between these values.

16. x: $\frac{7500}{5\text{ yrs.}} + 50 = 1550/\text{yr}$

y: $\frac{4800}{3\text{ yrs.}} + 75 = 1675/\text{yr}$

x saves N125/yr.

17. C Vendor: $\frac{150}{50\text{ units}}$ Machine: 1000 + $\frac{2.20}{1\text{ unit}}$

Let x = the number of units

$\frac{150}{50}(x) = 1000 + \frac{2.20}{1}(x)$

3x = 1000 + 2.2x
.8x = 1000
x = 1250 parts

18. C use

.250 - .253

14(.016) = .224
2(.014) = .028 16 pieces.
= .252

19. C $\frac{\frac{1}{2}\text{ in.}}{150{,}000\text{ mi}}$ $\frac{1}{300{,}000}$

A. $\frac{\frac{1}{150}}{1000} = \frac{1}{150{,}000}$

B. $\frac{\frac{1}{6}}{1000{,}000} = \frac{1}{600{,}000}$

C. $\frac{\frac{5}{6}}{250{,}000} = \frac{1}{300{,}000}$

D. $\frac{\frac{4}{5}}{500{,}000} = \frac{1}{625{,}000}$

20. B $\frac{N}{\text{Part}}$

$\frac{N7}{\text{hr.}} = \frac{1\text{ hr.}}{12\text{ parts}} = \frac{N7}{12\text{ parts}}$ .58 + 3.000 mat = N3.58

PART TWO

VERBAL APTITUDE TESTS

Verbal Aptitude Tests are relevant for all company tests.
Study this section carefully.

IEC MONTHLY SEMINAR

VERBAL REASONING TEST I

40 QUESTIONS
15 MINUTES

DIRECTIONS Each passage is accompanied by four statements relating to the information or arguments it contains. Assume that what is stated is true; even if it contradicts what you know or believe to be the case in reality. Decide on this assumption whether the statement is:

A **DEFINITELY TRUE** B **DEFINITELY UNTRUE** C **INSUFFICIENT INFORMATION**

Passage 1

Cardiovascular disease is so prevalent that virtually all businesses are likely to have employees who suffer from, or may develop, this condition. Research shows that between 50-80% of all people who suffer a heart attack are able to return to work. However, this may not be possible if they have previously been involved in heavy physical work. In such cases, it may be possible to move the employee to lighter duties, with appropriate retraining where necessary. Similarly, high-pressure, stressful work, even where it does not involve physical activity, should also be avoided. Human Resources managers should be aware of the implications of job for employees with a cardiac condition.

1. Physical or stressful work may bring on a heart attack

A The statement is **DEFINITELY TRUE,** or would be a reasonable conclusion to draw from the passage

B The statement is **DEFINITELY UNTRUE,** or would not be a reasonable conclusion to draw.

C I have **INSUFFICIENT INFORMATION** to answer either of the above with any certainty.

2. The majority of people who have suffered a heart attack can later return to work

A The statement is **DEFINITELY TRUE,** or would be a reasonable conclusion to draw from the passage

B The statement is **DEFINITELY UNTRUE,** or would not be a reasonable conclusion to draw.

C I have **INSUFFICIENT INFORMATION** to answer either of the above with any certainty.

3. Heart disease may affect employees in any type of business.

A The statement is **DEFINITELY TRUE,** or would be a reasonable conclusion to draw from the passage

B The statement is **DEFINITELY UNTRUE,** or would not be a reasonable conclusion to draw.

C I have **INSUFFICIENT INFORMATION** to answer either of the above with any certainty.

4. Heart disease can affect people of any age

A The statement is **DEFINITELY TRUE,** or would be a reasonable conclusion to draw from the passage

B The statement is **DEFINITELY UNTRUE,** or would not be a reasonable conclusion to draw.

C I have **INSUFFICIENT INFORMATION** to answer either of the above with any certainty.

Passage 2

So much of the literature of the western world, including a large part of its greatest literature, was either written for actual speaking or in a mode of speech, that we are likely to deform it if we apply our comparatively recent norm of writing for silent reading. It is only that so much of this work is drama or oratory (the latter including the modern forms of sermons, lectures and addresses which as late as the nineteenth century play a most important part). It is also that through classical and mediaeval times, and in many cases beyond these, most reading was either aloud or silently articulated as if speaking: a habit we now recognize mainly in the slow. Most classical histories were indeed quite close to oratory and public speech, rather than silent reading of an artefact, was the central condition of linguistic composition.

5. Until the nineteenth century, most people could only read with difficulty

A The statement is **DEFINITELY TRUE,** or would be a reasonable conclusion to draw from the passage

B The statement is **DEFINITELY UNTRUE,** or would not be a reasonable conclusion to draw.

C I have **INSUFFICIENT INFORMATION** to answer either of the above with any certainty.

6. In ancient times, literature was intended to be read aloud

A The statement is **DEFINITELY TRUE,** or would be a reasonable conclusion to draw from the passage

B The statement is **DEFINITELY UNTRUE,** or would not be a reasonable conclusion to draw.

C I have **INSUFFICIENT INFORMATION** to answer either of the above with any certainty.

7. Classical histories were passed on orally and never written down

A The statement is **DEFINITELY TRUE,** or would be a reasonable conclusion to draw from the passage

B The statement is **DEFINITELY UNTRUE,** or would not be a reasonable conclusion to draw.

C I have **INSUFFICIENT INFORMATION** to answer either of the above with any certainty.

8. Only people with literacy problems now read aloud

A The statement is **DEFINITELY TRUE,** or would be a reasonable conclusion to draw from the passage

B The statement is **DEFINITELY UNTRUE,** or would not be a reasonable conclusion to draw.

C I have **INSUFFICIENT INFORMATION** to answer either of the above with any certainty.

Passage 3

Millions of lives around the world could be saved, and the quality of life of hundreds of millions markedly improved-very inexpensively - by eradicating three vitamin and mineral vitamin A, iodine and iron -so-called micro nutrients. More than 2 billion people are at risk from micro nutrient deficiencies and more than 1 billion people are actually ill or disabled by them, causing mental retardation, learning disabilities, low work capacity and blindness. It costs little to correct these deficiencies through fortification of food and water supplies. In a country of 50 million people, this would cost about N25 million a year. That N25 million would yield a fortyfold return on investment.

9. Most illnesses in developing countries are caused by vitamin and mineral deficiencies

A The statement is **DEFINITELY TRUE, or** would be a reasonable conclusion to draw from the passage

B The statement is **DEFINITELY UNTRUE,** or would not be a reasonable conclusion to draw.

C I have **INSUFFICIENT INFORMATION** to answer either of the above with any certainty.

10. Micronutrients provide inadequate nourishment to maintain a healthy life

A The statement is **DEFINITELY TRUE,** or would be a reasonable conclusion to draw from the passage

B The statement is **DEFINITELY UNTRUE, or** would not be a reasonable conclusion to draw.

C I have **INSUFFICIENT INFORMATION** to answer either of the above with any certainty.

11. Vitamin A, iodine and iron are the only micronutrients that people need in their diet

A The statement is **DEFINITELY TRUE,** or would be a reasonable conclusion to draw from the passage

B The statement is **DEFINITELY UNTRUE,** or would not be a reasonable conclusion to draw.

C I have **INSUFFICIENT INFORMATION** to answer either of the above with any certainty.

12. Correcting micronutrient deficiencies would cost about N2 per person per year

A The statement is **DEFINITELY TRUE,** or would be a reasonable conclusion to draw from the passage

B The statement is **DEFINITELY UNTRUE,** or would not be a reasonable conclusion to draw.

C I have **INSUFFICIENT INFORMATION** to answer either of the above with any certainty.

Passage 4

The clinical guidelines in asthma therapy have now moved towards anti-inflammatory therapy-and away from regular bronchiodilator therapy-for all but the mildest asthmatics. This is now being reflected in prescribing patterns. In the U.S., Combined prescription volumes of the major bronchiodilators peaked in 1991 (having risen slowly in the preceding years), though they still account for around half of the 65 million asthma prescriptions there. During the same period, prescriptions for inhaled steroids have doubled, but still account for less than 10% of asthma prescriptions in the U.S.

13. Only mild cases of asthma can be helped by anti-inflammatory therapy

A The statement is **DEFINITELY TRUE,** or would be a reasonable conclusion to draw from the passage

B The statement is **DEFINITELY UNTRUE,** or would not be a reasonable conclusion to draw.

C I have **INSUFFICIENT INFORMATION** to answer either of the above with any certainty.

14. Use of bronchiodilators has been increasing since 1991

A The statement is **DEFINITELY TRUE,** or would be a reasonable conclusion to draw from the passage

B The statement is **DEFINITELY UNTRUE,** or would not be a reasonable conclusion to draw.

C I have **INSUFFICIENT INFORMATION** to answer either of the above with any certainty.

15. Doctors are reluctant to treat asthma with inhaled steroids for fear of potential side-effects

A The statement is **DEFINITELY TRUE,** or would be a reasonable conclusion to draw from the passage

B The statement is **DEFINITELY UNTRUE,** or would not be a reasonable conclusion to draw.

C I have **INSUFFICIENT INFORMATION** to answer either of the above with any certainty.

16. Bronchiodilators are the single most prescribed treatment for asthma

A The statement is **DEFINITELY TRUE,** or would be a reasonable conclusion to draw from the passage

B The statement is **DEFINITELY UNTRUE,** or would not be a reasonable conclusion to draw.

C I have **INSUFFICIENT INFORMATION** to answer either of the above with any certainty.

Passage 5

Relations between Sweden and European Community had always been restricted in scope by Sweden's traditional neutrality and for many years any suggestions of Community membership was out of the question. But the upheavals in Eastern Europe in the early 1990s gradually led to the conclusion that membership of the EC was no longer incompatible with its neutral stance. People came to the conclusion that Sweden has already taken over a large part of the Community rules and began to weigh up the pros and cons of membership along the lines sought by Austria.

17. Political changes in Eastern Europe led to a change in relations between Sweden and the European Community

A The statement is **DEFINITELY TRUE,** or would be a reasonable conclusion to draw from the passage

B The statement is **DEFINITELY UNTRUE,** or would not be a reasonable conclusion to draw.

C I have **INSUFFICIENT INFORMATION** to answer either of the above with any certainty.

18. The European Community rejected Sweden's application for membership because of its Neutrality

A The statement is **DEFINITELY TRUE,** or would be a reasonable conclusion to draw from the passage

B The statement is **DEFINITELY UNTRUE,** or would not be a reasonable conclusion to draw.

C I have **INSUFFICIENT INFORMATION** to answer either of the above with any certainty.

19. After abandoning its policy of neutrality, Sweden applied to join the European Community

A The statement is **DEFINITELY TRUE,** or would be a reasonable conclusion to draw from the passage

B The statement is **DEFINITELY UNTRUE,** or would not be a reasonable conclusion to draw.

C I have **INSUFFICIENT INFORMATION** to answer either of the above with any certainty.

20. Sweden applied for membership of the European Community after other neutral countries had joined

A The statement is **DEFINITELY TRUE,** or would be a reasonable conclusion to draw from the passage

B The statement is **DEFINITELY UNTRUE,** or would not be a reasonable conclusion to draw.

C I have **INSUFFICIENT INFORMATION** to answer either of the above with any certainty.

Passage 6

Buddhism was introduced to Japan from India via China and Korea around the middle of the sixth century. After gaining imperial patronage. Buddhism was propagated by the authorities throughout the country. In the early ninth century, Buddhism in Japan entered a new era in which it catered mainly to the court nobility. In the Kamakura period (1192-1338) an age of great political unrest and social confusion, there emerged many new sects of Buddhism offering hope of salvation to warriors and peasants alike. Buddhism not only flourished as a religion but also did much to enrich the country's arts and learning.

21. Buddhism was adopted by the court nobility at the urging of the emperor

A The statement is **DEFINITELY TRUE,** or would be a reasonable conclusion to draw from the passage

B The statement is **DEFINITELY UNTRUE,** or would not be a reasonable conclusion to draw.

C I have **INSUFFICIENT INFORMATION** to answer either of the above with any certainty.

22. The introduction of Buddhism to Japan led to great political unrest and social confusion

A The statement is **DEFINITELY TRUE,** or would be a reasonable conclusion to draw from the passage

B The statement is **DEFINITELY UNTRUE,** or would not be a reasonable conclusion to draw.

C I have **INSUFFICIENT INFORMATION** to answer either of the above with any certainty.

23. Buddhism replaced the Shinto religion which had previously been followed in Japan

A The statement is **DEFINITELY TRUE,** or would be a reasonable conclusion to draw from the passage

B The statement is **DEFINITELY UNTRUE,** or would not be a reasonable conclusion to draw.

C I have **INSUFFICIENT INFORMATION** to answer either of the above with any certainty.

24. Japanese arts and culture were greatly enriched by the introduction of Buddhism

A The statement is **DEFINITELY TRUE,** or would be a reasonable conclusion to draw from the passage

B The statement is **DEFINITELY UNTRUE,** or would not be a reasonable conclusion to draw.

C I have **INSUFFICIENT INFORMATION** to answer either of the above with any certainty.

Passage 7

In Japan, companies generally expect their employees to put in long hours of overtime. But it is difficult for women, who also have household chores to do and children to take care of, to work at the same pace as men, who are not burdened with such responsibilities. Many women inevitably opt for part-time jobs. Which enable them to combine work and domestic duties. At present, 23% of all female salaried workers are part-time and the ratio has been on the rise in recent years. Part-time work places women at a disadvantage. The wages of part-time workers are considerably lower than those of full-time employees, and part-time work tends to involve menial labour. Moreover, because salary and promotion in Japanese companies are often based on seniority, it is extremely difficult for women either re-entering the labour force or switching from part-time to full-time work

25. Japanese men do not share household chores and childcare with their wives.

A The statement is **DEFINITELY TRUE,** or would be a reasonable conclusion to draw from the passage

B The statement is **DEFINITELY UNTRUE,** or would not be a reasonable conclusion to draw.

C I have **INSUFFICIENT INFORMATION** to answer either of the above with any certainty.

26. A quarter of all part-time workers in Japan are female

A The statement is **DEFINITELY TRUE,** or would be a reasonable conclusion to draw from the passage

B The statement is **DEFINITELY UNTRUE,** or would not be a reasonable conclusion to draw.

C I have **INSUFFICIENT INFORMATION** to answer either of the above with any certainty.

27 part-time workers hold a low status in Japanese companies

A The statement is **DEFINITELY TRUE,** or would be a reasonable conclusion to draw from the passage

B The statement is **DEFINITELY UNTRUE,** or would not be a reasonable conclusion to draw.

C I have **INSUFFICIENT INFORMATION** to answer either of the above with any certainty.

28. Women in Japan are unwilling to work overtime

A The statement is **DEFINITELY TRUE,** or would be a reasonable conclusion to draw from the passage

B The statement is **DEFINITELY UNTRUE,** or would not be a reasonable conclusion to draw.

C I have **INSUFFICIENT INFORMATION** to answer either of the above with any certainty.

Passage 8

Abdominal pain in children may be a symptom of emotional disturbance, especially where it appears in conjunction with phobias or sleep disorders such as nightmares or sleep-talking. It may also be linked to eating habits: a study carried out in the USA found that children with pain tended to be more fussy about what and how much they ate, and to have over-anxious parents who spent a considerable time trying to persuade them to eat. Although abdominal pain had previously been linked to excessive milk-drinking, this research found that children with pain drank rather less milk than those in the control group.

29. There is no clear cause of abdominal pain in children

A The statement is **DEFINITELY TRUE, o**r would be a reasonable conclusion to draw from the passage

B The statement is **DEFINITELY UNTRUE, o**r would not be a reasonable conclusion to draw.

C I have **INSUFFICIENT INFORMATION** to answer either of the above with any certainty.

30. Abdominal pain in children may be psychosomatic in nature

A The statement is **DEFINITELY TRUE,** or would be a reasonable conclusion to draw from the passage

B The statement is **DEFINITELY UNTRUE,** or would not be a reasonable conclusion to draw.

C I have **INSUFFICIENT INFORMATION** to answer either of the above with any certainty.

31. Drinking milk may help to prevent abdominal pain in children

A The statement is **DEFINITELY TRUE,** or would be a reasonable conclusion to draw from the passage

B The statement is **DEFINITELY UNTRUE,** or would not be a reasonable conclusion to draw.

C I have **INSUFFICIENT INFORMATION** to answer either of the above with any certainty.

32. Children who have problems sleeping are more likely to suffer from abdominal pain

A The statement is **DEFINITELY TRUE,** or would be a reasonable conclusion to draw from the passage

B The statement is **DEFINITELY UNTRUE,** or would not be a reasonable conclusion to draw.

C I have **INSUFFICIENT INFORMATION** to answer either of the above with any certainty.

Passage 9

When Christianity was first established by law, a corrupt form of Latin had become the common language of all the western parts of Europe. The service of the Church accordingly, and the translation of the Bible which was read in churches, were both in that corrupted Latin which was the common language of the country. After the fall of the Roman Empire, Latin gradually ceased to be the language of any part of Europe. However, although Latin was no longer understood anywhere by the great body of the people, church services still continued to be performed in that language. Two different languages were thus established in Europe: a language of the priests and a language of the people.

33. After the fall of the Roman Empire, people who had previously spoken Latin returned to Their original languages

A The statement is **DEFINITELY TRUE,** or would be a reasonable conclusion to draw from the passage

B The statement is **DEFINITELY UNTRUE,** or would not be a reasonable conclusion to draw.

C I have **INSUFFICIENT INFORMATION** to answer either of the above with any certainty.

34. Latin continued to be used in church services because of the continuing influence of Rome

A The statement is **DEFINITELY TRUE,** or would be a reasonable conclusion to draw from the passage

B The statement is **DEFINITELY UNTRUE, o**r would not be a reasonable conclusion to draw.

C I have **INSUFFICIENT INFORMATION** to answer either of the above with any certainty.

35. Priests spoke a different language from the common people

A The statement is **DEFINITELY TRUE,** or would be a reasonable conclusion to draw from the passage

B The statement is **DEFINITELY UNTRUE,** or would not be a reasonable conclusion to draw.

C I have **INSUFFICIENT INFORMATION** to answer either of the above with any certainty.

36. Prior to the fall of the Roman Empire, Latin had been established by law as the language of The church in western Europe

A The statement is **DEFINITELY TRUE,** or would be a reasonable conclusion to draw from the passage

B The statement is **DEFINITELY UNTRUE,** or would not be a reasonable conclusion to draw.

C I have **INSUFFICIENT INFORMATION** to answer either of the above with any certainty.

Passage 10

In recent years it has become clear that man's use of fossil fuels is likely to have a major impact on the world's climate. As a result of this, increased concentrations of 'greenhouse' gasses such as carbon dioxide and methane will lead to global warming; an overall small increase in average temperatures; whose impact is difficult to predict, whilst some scientists predict melting of the polar icecaps, and so a raise in sea levels, others think this will be balanced by increased precipitation at the poles.

37. If we go on using fossil fuels at the present rate, we must expect climatic change

A The statement is **DEFINITELY TRUE,** or would be a reasonable conclusion to draw from the passage

B The statement is **DEFINITELY UNTRUE,** or would not be a reasonable conclusion to draw.

C I have **INSUFFICIENT INFORMATION** to answer either of the above with any certainty.

38. Depletion of the ozone layer will result in global warming

A The statement is **DEFINITELY TRUE,** or would be a reasonable conclusion to draw from the passage

B The statement is **DEFINITELY UNTRUE,** or would not be a reasonable conclusion to draw.

C I have **INSUFFICIENT INFORMATION** to answer either of the above with any certainty.

39. Scientists all agreed that use of fossil fuels will eventually lead to a rise in sea levels.

A The statement is **DEFINITELY TRUE,** or would be a reasonable conclusion to draw from the passage

B The statement is **DEFINITELY UNTRUE,** or would not be a reasonable conclusion to draw.

C I have **INSUFFICIENT INFORMATION** to answer either of the above with any certainty.

40. The burning of fossil fuels increase the concentration of methane in the atmosphere.

A The statement is **DEFINITELY TRUE,** or would be a reasonable conclusion to draw from the passage

B The statement is **DEFINITELY UNTRUE,** or would not be a reasonable conclusion to draw.

C I have **INSUFFICIENT INFORMATION** to answer either of the above with any certainty.

ANSWER KEY

1 This does not follow logically from the information given. This is therefore UNTRUE

2. This does follow logically from the information given. This is therefore TRUE

3. This follows logically from the opening statement that virtually all business are likely to have employees who suffer from or may develop this condition. TRUE

4. There is INSUFFICIENT INFORMATION in the passage to answer this.

5. Until the nineteenth century, most people could only read with difficulty. INSUFFICIENT INFORMATION

6. In ancient times, literature was intended to be read aloud. TRUE

7. Classical histories were passed on orally and never written down. UNTRUE

8. Only people with literacy problems now read aloud. TRUE

9. Most illnesses in developing countries are caused by vitamin and mineral deficiencies. INSUFFICIENT INFORMATION

10. Micronutrients provide inadequate nourishment to maintain a healthy life. UNTRUE

11. Vitamin A, iodine and iron are the only micronutrients that people need in their diet. INSUFFICIENT INFORMATION

12. Correcting micronutrient deficiencies would cost about N2 per person per year. UNTRUE

13. Only mild cases of asthma can be helped by anti-inflammatory therapy. UNTRUE

14. Use of bronchiodilators has been increasing since 1991. UNTRUE

15. Doctors are reluctant to treat asthma with inhaled steroids for fear of potential side-effects. INSUFFICIENT INFORMATION

16. Bronchiodilators are the single most prescribed treatment for asthma. TRUE

17. Political changes in Eastern Europe led to a change in relations between Sweden and the European Community. TRUE.

18. The European Community rejected Sweden's application. UNTRUE

19. After abandoning its policy of neutrality, Sweden applied to join the European Community. UNTRUE

20. Sweden applied for membership of the European Community after other neutral countries had joined. INSUFFICIENT INFORMATION

21. Buddhism was adopted by the court nobility at the urging of the emperor. UNTRUE

22. The introduction of Buddhism to Japan led to great political unrest and social confusion. UNTRUE

23. Buddhism replaced the Shinto religion which had previously been followed in Japan. INSUFFICIENT INFORMATION

24. Japanese arts and culture were greatly enriched by the introduction of Buddhism. TRUE.

25. Japanses men do not share household chores and childcare with their wives. TRUE.

26. A quarter of all part-time workers in Japan are female. UNTRUE

27. Part-time workers hold a low status in Japanese companies. TRUE.

28. Women in Japan are unwilling to work overtime. INSUFFICIENT INFORMATION

29. There is no clear cause for abdominal pain in children. TRUE

30. Abdominal pain in children may be psychosomatic in nature. TRUE

31. Drinking milk may help to prevent abdominal pain in children. INSUFFICIENT INFORMATION

32. Children who have problems sleeping are more likely to suffer from abdominal pain. INSUFFICIENT INFORMATION

33. After the fall of the Roman Empire, people who had previously spoken Latin returned to their original languages. TRUE

34. Latin continued to be used in church services because of the continuing influence of Rome. UNTRUE

35. Priests spoke a different language from the common people. TRUE

36. Prior to the fall of the Roman Empire, Latin had been established by law as the language of The Church in western Europe. UNTRUE

37. If we go on using fossil fuels of at present rate, we must expect climatic change. This is TRUE.

38. Depletion of the ozone layer will result in global warming. There is INSUFFICIENT INFORMATION in the passage to answer this.

39. Scientists all agreed that use of fossil fuel will eventually lead to a rise in sea level. This is UNTRUE .

40. This is TRUE according to the passage.

VERBAL REASONING TEST II

60 QUESTIONS
20 MINUTES

DIRECTIONS **In this test you are required to evaluate each statement in the light of the passage. Read through the passage and evaluate the statements according to the rules.**

TRUE: If the statement follows logically from the information or opinions contained in the passage	FALSE: If the statement is obviously false from the information or opinions contained in the passage	If you CANNOT SAY whether the statement is true or false without further information
Click on A	Click on B	Click on C

1.

Often, crimes are characterized as either malum in se - inherently evil - or malum prohibitum - criminal because they are declared as offenses by a legislature. Murder is an example of the former. Failing to file a tax return illustrates the latter. Some jurisdictions no longer distinguish between crimes malum in se and malum prohibitum, although many still do.

From the information given above, it can be validly concluded that

1. Many jurisdictions no longer distinguish between crimes malum in se and malum prohibitum. A B C

2. Some jurisdictions still distinguish between crimes malum in se and malum prohibitum A B C

3. Some crimes characterized as malum in se are not inherently evil. A B C

4. Some crimes characterized as malum prohibitum are not declared by a legislature to be an offense. A B C

5. Some times failing to file a tax return is characterized as malum in se. A B C

2.

A trucking company can act as a common carrier - for hire to the general public at published rates. As a common carrier, it is liable for any cargo damage, unless the company can show that it was not negligent. If the company can demonstrate that it was not negligent, then it is not liable for cargo damage. In contrast a contract-carrier (a trucking company hired by a shipper under a specific contract) is only responsible for cargo damage as spelled out in the contract. A claus Inc. Tractor-trailer, acting under common carrier authority, was in a 5 -vehicle accident that damaged its cargo. A Nichols Inc. Tractor-trailer, acting under contract authority, was involved in the same accident, its cargo was also damaged.

From the information given above, it can be validly concluded that, in reference to the accident, if:

6. Claus Inc. is liable, then it can show that it was not negligent. A B C

7. Claus Inc. cannot show that it was not negligent, then it is not liable. A B C

8. Claus Inc. can show that it was not negligent, then it not liable. A B C

9. Nicols Inc. is liable, then it cannot show that it is negligent. A B C

10. Nichols Inc.can show that it is not negligent, then it is liable. A B C

3.

A rapid changing technical environment in government is promoting greater reliance on electronic mail (e-mail) systems. As this usage grows, there are increasing chances of conflict between the user's expectations of privacy and public access rights. In some investigations access to all e-mail, including those message stored in archival files and messages outside the scope of the investigation, has been sought and granted. In spite of this, some people send message through e-mail that would never be said face-to-face or written formally.

From the information above, it CANNOT be validly concluded that::

11. Some e-mail messages that have been requested as part of investigations have contained messages that would never be said face-to-face. A B C

12. Some message that people would never say face-to-face are sent in e-mail messages. A B C

13. Some e-mail messages have been requested as part of investigations. A B C

14. e-mail messages have not been exempted from investigations. A B C

15. Some e-mail message contain information that would be omitted from formal writing. A B C

4.

Phyllis T. Is a former federal employee who was entitled to benefits under the Federal Employee Compensation Act because of a job-related, disabling injury. When an eligible employee has such an injury, the benefit is determined by this test. If the beneficiary is married or has dependents, benefits are 3/4 of the person's salary at the time of the injury; otherwise, benefits are at 2/3 of the salary. Phyllis T.'s benefits were 2/3 of her salary when she was injured.

From the information given above, it can be validly concluded that, when Phyllis T. Was injured, she:

16. Was married but without dependents. A B C

17. Was not married and had no dependents. A B C

18. Was not married but had dependents. A B C

19. Was married and had dependents. A B C

20. Had never been married. A B C

5.

Some 480,000 immigrants were living in a certain country in 1999. Although most of these immigrants were not employed in professional occupations many of them were. For instance, many of them were engineers and many of them were nurses. Very few of these immigrants were librarians, another professional occupation.

From the information given above, it can be validly concluded, that in 1999, in the country described above:

21. Most immigrants were either engineers or nurses. A B C

22. It is not the case that some of the nurses were immigrants. A B C

23. None of the engineers were immigrants. A B C

24. Most of those not employed in professional occupations were immigrants. A B C

25. Some of the engineers were immigrants. A B C

6.

Police officers were led to believe that many weapons sold at a certain gun store were sold illegally. Upon investigating the lead, the officers learned that all of the weapons sold by the store that were made by Precision Arms were sold legally. Also, none of the illegally sold weapons were .45 caliber.

From the information given above, it can be validly concluded that, concerning the weapons sold at the store

26. All of the .45 caliber weapons were made by Precision Arms. A B C

27. None of the .45 caliber weapons were made by Precision Arms. A B C

28. Some of the weapons made by Precision Arms were .45caliber weapons. A B C

29. All of the .45 caliber weapons were sold legally. A B C

30. Some of the weapons made by Precision Arms were sold illegally. A B C

7.

Impression by the ridges on the ends of the fingers and thumbs are useful means of identification, since no two people have the same pattern of ridges. If finger patterns from fingerprints are not decipherable, then they cannot be classified by general shape and contour or by pattern type. If they cannot be classified by these characteristics then it is impossible to identify the person to whom the fingerprints belong.

From the information given above, it CANNOT be validly concluded that, if:

31. It is possible to identify the person to whom fingerprints belong, then the fingerprints are deciherable. A B C

32. Finger patterns from fingerprints are not decipherable, then it is impossible to identify the person to whom the fingerprints belong. A B C

33. Fingerprints are deciherable, then it is impossible to identify the person to whom they belong. A B C

34. Fingerprints can be classified by general shape and contour or by pattern type, then they are decipherable. A B C

35. It is possible to identify the person to whom fingerprints belong, then the fingerprints can be classified by general shape and contour or pattern type. A B C

8.

Explosives are substances or devices capable of producing a volume of rapidly expanding gases that exert a sudden pressure on their surroundings. Chemical explosives are the most commonly used, although there are mechanical and nuclear explosives. All mechanical explosives are devices in which a physical reaction is produced, such as that caused by overloading a container with compressed air. While nuclear explosives are by far the most powerful, all nuclear explosives have been restricted to military weapons.

From the information given above, it can be validly concluded that:

36. All explosives that have been restricted to military weapons are nuclear explosives. A B C

37. No mechanical explosives are devices in which a physical reaction is produced, such as that caused by over loading a container with compressed air. A B C

38. Some nuclear explosives have not been restricted to military weapons. A B C

39. All mechanical explosives have been restricted to military weapons. A B C

40. Some devices in which a physical reaction is produced, such as that caused by overloading a container with compressed air, are mechanical explosives. A B C

9.

The Supreme Court's recent decision is unfair. It treats non-resident aliens as a special group when it denies them some rights ordinary citizens have. This treatment is discriminatory, and we all know that discrimination is unfair.

Which of the following arguments is most nearly similar in its reasoning to the above argument?

41. Doing good would be our highest duty under the moral law, and that duty would be irrational unless we had the ability to discharge it; but since a finite, sensuous creature could never discharge that duty in his lifetime, we must conclude that if there is moral law, the soul is immortal. A B C

42. Required core courses are a good idea because students just entering college do not have as good an idea about what constitutes a good education as do the professional educators; therefore, students should not be left complete freedom to select course work. A B C

43. This country is the most free nation on earth largely as a result of the fact that the founding fathers had the foresight to include a Bill of Right in the Constitution. A B C

44. Whiskey and beer do not mix well; every evening that I have drunk both whiskey and beer together, the following morning I have had a hangover. A B C

45. I know that this is a beautiful painting because Picasso created only beautiful works of art, and this painting was done by Picasso. A B C

10.

Creativity must be cultivated. Artists, musicians and writers all practice, consciously or unconsciously, interpreting the world from new and interesting viewpoints. A teacher can encourage his pupils to be creative by showing them different perspectives for viewing the significance of events in their daily lives.

Which of the following, if true, would most undermine the author's claim?

46. In a well-ordered society, it is important to have some people who are not artists, musicians, or writers. A B C

47. A teacher's efforts to show a pupils different perspectives may actually inhibits development of the student's own creative process. A B C

48. Public education should stress practical skills, which will help a person get a good job, instead of creative thinking. A B C

49. Not all pupils have the same capacity for creative thought. A B C

50. Some artists, musicians and writers "burn themselves out" at a very early age, producing a flurry of great works and then nothing after that. A B C

11.

Opponents to the mayor's plan for express bus lanes on the city's major commuter arteries objected that people could not be lured out of their automobile in that way. The opponents were proved wrong; following implementation of the plan, bus riderssship rose dramatically, and there was a corresponding drop in automobile traffic. Nonetheless, the plan failed to achieve its stated objective of reducing average commuter time

Which of the following sentences would be the most logical continuation of this argument?

51. The plan's opponents failed to realize that many people would take advantage of improved bus transportation A B C

52. Unfortunately, politically attractive solutions do not always get results. A B C

53. The number of people a vehicle can transport varies directly with the size of the passenger compartment of the vehicle. A B C

54. Opponents cited an independent survey of city commuters showing that before plan's adoption only one out of every seven bus commuter has bus lanes. A B C

55. With the express lanes closed to private automobile traffic, the remaining cars were forced to use too few lanes and this created gigantic traffic tie-ups. A B C

12.

Efficiency expert will attempt to improve the productivity of an office by analyzing production procedures into discrete work tasks. They then study the organization of those tasks and advise manager on techniques to speed production, such as rescheduling of employee breaks or relocating various equipments such as the copying machines. I have found a way to accomplish increases in efficiency with much less to do. Office workers grow increasingly productive as the temperature drops, so long as it does not fall below 68F.

The passage leads most naturally to which of the following conclusions?

56. Some efficiency gains will be short-term only. A B C

57. To maintain peak efficiency, an officer manager must occasionally restructure office tasks. A B C

58. Employees are most efficient when the temperature is at 68^0F. A B C

59. The temperature-efficiency formula is applicable to all kind of work. A B C

60. Office workers will be equally efficient at 67^0F and 69^0F. A B C

ANSWERS AND EXPLANATIONS

1. C. Cannot say because it cannot be inferred that many do not make the distinction.
2. A. True because if many jurisdictions make the distinction, then some jurisdictions make the distinction.
3. B. False, based on erroneous definitions of two classes of crimes.
4. B. False, based on erroneous definitions of two classes of crimes.
5. B. False, based on erroneous definitions of two classes of crimes.
6. B. False, because it contradicts the rule by claiming that when clause inc. is liable it can show that it was not negligent.
7. B. False, because it contradicts the rule by claiming that clause Inc. is not liable even when it cannot show that it is not negligent.
8. A. True , from the rule it follows that if clause Inc. can show it was negligent, then it is not liable.
9. C. Cannot say because the terms of the Nichols Inc. contract were not disclosed in the paragraph.
10. C. Cannot say because the terms of the Nichols Inc. contract were not disclosed in the paragraph.
11. A. This is the only choice that does NOT represent a valid conclusion, because even though we know from the paragraph that there is a group of e-mail messages that are requested in investigation and also that there is a group of messages that contain information that people would not say face-to face , there is nothing that says that these groups overlap.
12. A. This is a valid conclusion because it restates a fact given in the last sentence of the paragraph.
13. A. This can be inferred from the passage.
14. A. This can be inferred from the passage.
15. A. This is a valid conclusion because it restates the other fact in the last sentence of the paragraph.
16. B. False because it states that she was married.
17. A. Phyllis T. was not married and had no dependents. Phyllis T. did not meet either requirement to qualify for the higher benefit lever (3/4 of salary).
18. B. False because it states that she had dependents.
19. B. False because it states that she was both married and had dependents.
20. C. Cannot say because it goes beyond the facts given because prior marriages are not listed as a

factor relating to this benefit.

21. B. This says that most immigrants are engineers or nurses, which are professional occupations. However, the second sentence says that most immigrants are not employed in professional occupations.

22. B. This is false because it denies that there is any overlap between immigrants and nurses, even though this overlap is clear from the third sentence of the paragraph.

23. B. This is false because it denies the overlap between immigrants and engineers.

24. C. Cannot say, this is invalid from the passage

25. A. This is correct because it restates the third sentence interms of the overlap between immigrants and engineers in the country described in the paragraph.

26. C. Cannot say. There was no sufficient information on this from the passage.

27. B. This is invalid based on the information given in the passage.

28. B. This is false.

29. A. All of the 45 caliber weapons were sold legally. The second and last sentence are the two main premises in this paragraph.

30. B. This contradicts the second sentence, it is therefor false.

31. B. This refers to a condition where it is possible to identity the person to whom finger prints belongs.

32. B. This refers to a condition.

33. A. This is invalid because the paragraph does not provide enough information to conclude whether or not it would be possible to identify the person.

34. B. According to the third sentence, it is possible to identify the person to whom fingerprints belongs.

35. B. It is valid in the passage.

36. B. This is incorrect because the paragraph does not provide sufficient information to validly conclude that all explosives that have been restricted to military weapons are nuclear weapons.

37. B. It contradicts the passage.

38. B. It contradicts the passage.

39. C. It is incorrect because the paragraph provides no information about whether or not mechanical explosives are restricted to military weapons.

40. A. Some devices in which a physical reaction is produced, such as that caused by overloading a container with compressed air, are mechanical explosives.

41. B. This is false because it is purely hypothetical in its form.

42. B. This moves from the premise that students are not good judges of their needs to a conclusion

about the responsibility for planning course work.

.43. B. This is not technically speaking or even an argument.

44. B. This is false since the premise is not the same as the conclusion.

45. A. The argument given in the question stem is circular, that is, it begs the questions.

46. C. It opens an entirely new line of argument.

47. A. The author's claim depends in a very important way on the assumption that the assistance he advocates will be successful.

48. B. The statement is wrong.

49. B. The statement is wrong.

50. B. It is wrong because it does not attributes the burnout to the training of the sort proposed by the author.

51. C. This is irrelevant since it does not explain what went wrong after the plan was adopted.

52. B. This is wrong because it does not address the sequence of events which was justified in the passage.

53. B. It does not explain the plan's failure

54. B. Given that the plan was adopted, it did not explain why it then failed.

55. A. It supplies the unforeseen side effect since the cars barked upon too few lanes, total flow of traffic was actually slowed, not speeded up.

56. B. This is not a conclusion.

57. B. This not a conclusion

58. A. The author says office workers work better the cooler the temperature - provided the temperature does not drop below 68^0. Therefore, we can conclude , the temperature at which workers will be most efficient will be precisely 68^0.

59. C. It goes beyond the scope of the author's claim

LOGICAL REASONING TEST

100 QUESTIONS
60 MINUTES

DIRECTIONS Each question or group of questions is based on a passage, graph, table, or set of conditions. In answering some of the questions, it may be useful to draw a rough diagram. For each question, select the best answer choice given.

A corporation occupies all ten floors of a building. Each floor is completely occupied by a department: legal occupies one floor, marketing occupies two floors, research occupies three floors, and acquisitions occupies four floors.

Marketing occupies adjacent floors.

Marketing and acquisitions are not on adjacent floors.

The top and bottom floors are occupied by research.

Legal and research are not on adjacent floors.

1. If legal is on floor 5 and marketing is on floor 4, which of the following must be true?

(A) Floor 2 is occupied by acquisitions.
(B) Floor 6 is occupied by research.
(C) Floor 7 is occupied by research.
(D) Floor 8 is occupied by research.
(E) Floor 9 is occupied by acquisitions.

2. Which of the following are departments that CANNOT occupy floors 2,3, and 4, respectively?

(A) Marketing, marketing, research.
(B) Acquisitions, acquisitions, legal.
(C) Acquisitions, acquisitions, acquisitions.
(D) Research, acquisitions, legal.
(E) Research, marketing, marketing.

3. If floors 2 is a research floor and floors 3 and 4 are acquisitions floors, then legal must be on which floor?

(A) 5
(B) 6
(C) 7
(D) 8
(E) 9

4. If floor 3 is occupied by research and floor 4 by marketing, then legal must be on which floor?

(A) 2
(B) 5
(C) 6
(D) 7
(E) 9

5. If acquisitions occupy four consecutive floors, then legal and marketing could occupy which floors, respectively?

(A) 1 and 2
(B) 3 and 4
(C) 4 and 5
(D) 5 and 6
(E) 6 and 7

Four women visits a tailor, and at least three wants to order two dresses each ,one for a wedding and one for a graduation. The tailor has five different fabrics to choose from- solid blue, solid green, solid red, patterned polka dots, and patterned stripes- and each woman who orders wants each of her two dresses to be made with a different fabric. In addition, at least one of the wedding dresses and at least one of the graduation dresses must be a solid color fabric. Finally, if a woman wants a red dress for the wedding, then she also wants a patterned dress for the graduation.

6. Suppose all four women orders dresses. What is the greatest number of solid-color graduation dresses that can be made?

(A) One
(B) Two
(C) Three
(D) Four
(E) Five

7. All four women order dresses, and two of them order red dresses for the wedding. Which of the fabrics CANNOT be used for the wedding?

(A) Any of the fabrics available can be used.
(B) Blue
(C) Green
(D) Polka-dotted
(E) Striped

8. If exactly three women orders two red dresses and one striped dress for the wedding, they could order which dresses for the graduation (in the same order)?

(A) Green, green and striped
(B) Striped , red, and red
(C) Striped , green, and green
(D) Polka dots, striped, and striped
(E) Polka dots, polka dots, blue.

9. If exactly three women order dresses, they CANNOT order which of the following three dresses for the weeding?

(A) Blue, green striped
(B) Red, polka dots blue
(C) Green, green, green
(D) Red, red, red
(E) Blue, blue, blue

10. If nobody orders a red dress for one of the occasions, then what must be true of that particular occasion?

(A) Both polka dot and green dresses must be made.
(B) Both polka dot and striped dresses must be made.
(C) Either blue or green dresses or both must be made.
(D) Either polka dot or striped dresses, but not both, must be made.
(E) Either blue or striped dresses must be the only ones made.

A rock band tours five cities – Albany, Boston, Chicago, Detroit, and Evanston. The tour schedule follows these rules:
The tour stops at Boston before either Detroit or Evanston.
The tour stops at one city after Albany before stopping at Detroit.
The tour does not stop in Chicago second.

11. Evanston cannot be visited

(A) First
(B) Second
(C) Third
(D) Fourth
(E) Fifth

12. Suppose the first stop on the tour is Albany. Which of the following must be true ?

(A) The band visits Chicago before it visits Detroit.
(B) The band visits Chicago fourth.
(C) The band visits Boston second.
(D) The band visits Evanston fourth.
(E) The band visits Chicago before it visits Boston.

13. Every one of the cities can be scheduled for which particular spot on the tour?

(A) First
(B) Second
(C) Third
(D) Fourth
(E) Fifth

14. Which of the following must be true if the band visits Albany immediately before Chicago?

(A) The third city on the tour is Albany.
(B) The first city on the tour is Boston.
(C) The fourth city on the tour is Chicago.
(D) The fifth city on the tour is Detroit.
(E) The second city on the tour is Evanston.

15. Suppose three consecutive stops on the tour are Boston, Detroit, and Evanston, respectively. When can Albany be visited?

(A) Either first or second.
(B) Either first or fifth.
(C) Either second or third.
(D) Either third or fifth
(E) Either fourth or fifth

16. If the band decides to play Detroit last, then

(A) Albany must be third.
(B) Boston must be second.
(C) Chicago must be first.
(D) Chicago must be fourth.
(E) Evanston must be fourth.

A ski resort has a lodge at the top of the mountain and six scenic points: Evergreen , Frost Forest, the Gorge, Heavenly, Ice Palace, and Joker's Peak. The following ski trails are open with lifts: between Evergreen and Forest, between Ice Palace and Forest, between Heavenly and Forest, between Heavenly and Joker's Peak, between Joker's Peak and Evergreen, between the lodge and Joker's Peak, and between the lodge and Ice Palace. In addition, there are trails between the lodge and Heavenly and between Heavenly and the Gorge, and a one-way trail that goes only from the Gorge to the lodge. Because of lines involved at each stop, a skier wants to make the fewest number of stops.

17. A skier is at the Ice Palace and wants to go to the gorge with as few stops as possible. The first two stops will be

(A) Frost forest and then Heavenly
(B) The lodge and then the Gorge
(C) Frost Forest and then Evergreen
(D) The lodge and then Joker's Peak
(E) The Gorge and then Heavenly.

18. A skier is at Joker's Peak and wants to go to the Ice Palace. Her next stop must be.

(A) Ice Palace
(B) Evergreen
(C) Heavenly
(D) The lodge
(E) Frost Forest

19. Suppose a skier is at the lodge, and she wants to go to Joker's Peak and the Gorge in no particular order but with the fewest possible stops. What will the order of her first two stops?

(A) The Gorge, Heavenly.
(B) Heavenly, the Gorge
(C) Heavenly, Joker's Peak.
(D) Joker's Peak, Heavenly.
(E) Joker's Peak, the lodge.

20. A skier at Evergreen heads to the Ice Palace, but not through Frost Forest and in the fewest number of stops. The first two stops have to be.

(A) Joker's Peak and then Heavenly.
(B) Frost Forest and then the Gorge.
(C) Joker's Peak and then the lodge.
(D) The Gorge and then Heavenly.
(E) Heavenly and then the lodge.

Five houses on one side of street-numbered 101, 103, 105, 107 and 109 – are going to be painted by a painting company. There are six colors to choose from – white, blue, chartreuse, yellow, green and tan.
The houses are painted based in the same rules
A house adjacent to one painted in one color can be painted in the same color.
No more than three houses can be painted the same color.
No more than one house can be painted chartreuse.
If 101 is painted chartreuse, no house can be painted yellow.
If a house numbered higher than a house painted green is painted blue, then
There are exactly two houses, which are painted blue
House 109 is painted white.

21. Which of the following is an acceptable order of colors for the houses, from 101 to 109, respectively?

(A) Chartreuse, tan, blue, green, white.
(B) Chartreuse, tan, green, blue, white.
(C) Yellow, chartreuse, tan, chartreuse, blue.
(D) Green, white, white, white, white.
(E) White, tan, chartreuse, chartreuse, white.

22. Three houses can be painted blue if house 101 is painted in any of the following colors EXCEPT.

(A) Green.
(B) Chartreuse.
(C) Tan.
(D) White
(E) Yellow.

23. Suppose the houses are painted using the most number of different Colors, and that 101 is painted chartreuse and 103 is painted tan. Which of the following sets of colors must be used?

(A) 105: blue 107: green.
(B) 105: blue 107 : white
(C) 105: green 107: blue
(D) 105: green 107: yellow.
(E) 105: white 107: yellow.

24. If houses 101, 103 and 105 are painted tan, chartreuse, and green, respectively, it must be true that.

(A) No house is painted blue.
(B) No house is painted white.
(C) No house is painted yellow.
(D) The houses are painted using four colors.
(E) The houses are each painted differently.

25 If houses 101 and 103 are both painted yellow, which of the following CANNOT be the colors used to paint the three other houses?

(A) White, white, white.
(B) Tan. Chartreuse, white.
(C) Chartreuse, white, white.
(D) Green, blue, white.
(E) Yellow, blue, white.

26. If all the houses are painted using only two colors, which of the following statements must be true?

(A) No house is painted blue.
(B) No house is painted green.
(C) No house is painted tan.
(D) No house is painted chartreuse.
(E) No house is painted yellow.

Questions 27 – 30 refer to the following:

Lindsay offers private piano lessons in her home on Sunday, Monday and Tuesday from 3 p.m. to 4 p.m. and from 4 p.m. to 5 p.m. Her six students are Adam, Brooke, Carina, David, Elizabeth, and Fred.
Her students have the following scheduling requirements:
Adam needs his lesson to start at 4 p.m.
Brooke has basketball practice Monday and Tuesday afternoons, so she needs to schedule her lessons on Sunday.
Carina and David are siblings and want their lessons on the same day.
Elizabeth can never have her lesson on Sunday.
Fred needs his lesson to start at 3 p.m.

27. Which of the following represents a feasible schedule for lessons to be held at Sun. 3 p.m., Sun. 4 p.m., Mon. 3 p.m., Mon. 4 p.m., Tues. 3 p.m., and Tues. 4 p.m.?

(A) Brooke, Adam, Elizabeth, Fred, David, Carina.
(B) Brooke, Adam, Fred, Carina, Elizabeth, David.
(C) Carina, David, Fred, Adam, Brooke, Elizabeth.
(D) Elizabeth, Brooke, Fred, Adam, Carina, David.
(E) Fred, Brooke, Carina, David, Elizabeth, Adam.

28. Which of the following must be true?

(A) Adam and Fred must have their lessons on the same day.
(B) Brooke and Elizabeth must have their lessons on the same day.
(B) Brooke must have her lesson at 4 p.m.
(C) Carina and David must have their lessons both on Monday or Tuesday.
(E) Fred must have his lesson on Sunday.

29. If Elizabeth's lesson is at 3 p.m. on Tuesday, who must be scheduled for 4 p.m. on the same day?

(A) Adam
(B) Brooke
(C) Carina
(D) David
(E) Fred

30. If Fred is scheduled on Tuesday at 3 p.m., which of the following statements must be true?

(A) Adam can be scheduled on Tuesday.
(B) Brooke can be scheduled at 4 p.m. on Sunday.
(C) Carina can be scheduled on Sunday.
(D) David can be scheduled on Tuesday.
(E) Elizabeth must be scheduled on Tuesday at 4 p.m.

Four girl scout leaders (listed in order from most experienced to least experienced) are A, B,C and D, and four boy scout leaders (listed in the same order) are E, F, G, and H. These leaders are offering two workshops to their troops – basket weaving and fishing – and each workshop is taught by three leaders based on these rules:
All three districts must be represented at every workshop.
B and F are from district 1.
A, D and H are from district 2.
C, E and G are from district 3.
Two or more of the girl scout leaders must teach basket weaving because they are more experienced at it.
Not less than two boy scout leaders must teach fishing because they are more experienced at it.
The leader with the most experience in each workshop is responsible for that workshop.
Should one of the leaders be absent, then the replacement leader must also fulfill all the rules.
Each leader can teach at most one workshop.

31. If G is responsible for the fishing workshop, who must also be teaching at that workshop?

(A) A, F
(B) B, D
(C) B, H
(D) C, H
(E) D, E

32. Which of the following pairs includes at least one leader who must teach a workshop?

(A) A, D
(B) C, E
(C) B, F
(D) C, G
(E) A, H

33. The three teachers of the fishing workshop could be

(A) A, B and E
(B) B, D and G
(C) C, F and H
(D) D, E, and H
(E) E, G, and H

34. The three teachers for the basket weaving workshop could be

(A) A, B and G
(B) A, E and F
(C) B, C, and F
(D) B, E, and H
(E) C, D, and G

35 Suppose the teachers for the fishing workshop are D, F, and G. If E is not teaching a workshop, which of the following is not necessarily true?

(A) B is teaching basket-weaving.
(B) C is teaching basket-weaving.
(C) Only one of A or H is teaching basket-weaving.
(D) C is responsible for the basket-weaving workshop.
(E) F is responsible for the fishing workshop.

36. Suppose C, D, and F teach the basket-weaving workshop, and suppose G replaces someone to teach the fishing workshop. Which of the leaders must now be responsible for the fishing workshop?

(A) B
(B) E
(C) F
(D) G
(E) H

37. If C and F, but not D, teach basket-weaving and a third leader is appointed, which of the following will now be responsible for that workshop?

(A) A
(B) B
(C) C
(D) F
(E) H

Williams High School is closing and its best teachers may be transferred to either of two other schools. Allendale Academy and Fleetwood High. The transferable teachers are four women (Ms. Flint, Ms. James, Ms. Chang, Ms. Heckels) and four men (Mr. Barson, Mr. Davis, Mr. Gardia, Mr. Peters).

At least seven of the eight teachers must be placed in a new school.

Ms. James and Mr. Peters work as partners and must be assigned to the same school.

Mr. Barson and Mr. Davis are both drama teachers; neither of the new schools needs more than one drama teacher.

Mr. Barson and Ms. Flint are married and must be place in the same school.

Each of the two schools must receive at least one new teacher.

38. If the only male teacher assigned to Allendale is Mr. Davis, which of the following must be true?

(A) No more than five teachers are assigned to Fleetwood.
(B) At least three of the male teachers are assigned positions.
(C) Exactly two teachers are assigned to Allendale.
(D) Each school is assigned two of the female teachers.
(E) All of the female teachers are assigned positions.

39. Which of the following could be the entire list of teachers assigned to Allendale?

(A) Ms. Chang, Mr. Peters, Ms. Flint, Mr. Davis, Ms. James, Mr. Garcia.
(B) Mr. Davis, Mr. Garcia, Mr. Peters, Ms. Chang, Mr. Barson.
(C) Ms. Flint, Mr. Peters, Mr. Garcia, Mr. Barson.
(D) Ms Chang, Mr. Barson, Ms Heckels, Ms. Flint, Mr. Garcia.
(E) Mr. Barson, Ms. Chang, Ms Flint, Ms. James.

40. Suppose we know that Mr. Davis is transferred to one of the two schools, and that only Mr. Barson and one other teacher are assigned to Allendale. Which of the following must be transferred to Fleetwood?

(A) Ms. Heckels, Mr. Peters, Mr. Davis, but not Ms. Chang.
(B) Ms. James, Mr. Davis, Mr. Peters, and at least two others.
(C) Mr. Davis, Ms James, Mr. Peters, Ms. Chang, but not Ms. Heckels.
(D) Mr. Davis, Ms. Chang, Ms. Heckels, Mr. Peters.
(E) Ms. Chang, Mr. Davis, Ms. Heckels and at least two others.

An office manager must assign offices to six staff members. The available offices, numbered 1-6 consecutively, are arranged in a row, and are separated only by six-foot-high dividers. Therefore, voices, sounds, and cigarette smoke readily pass from each office to those on either side.

Miss Braun's work requires her to speak on the telephone frequently throughout the day.
Mr. White and Mr. Black often talk to one another in their work, and prefer to have adjacent offices.
Miss. Green, the senior employee, is entitled to Office 5, which has the largest window.
Mr. Parker needs silence in the office adjacent to his own.
Mr. Allen, Mr. White and Mr. Parker all smoke. Miss. Green is allergic to tobacco smoke and must have nonsmokers in the office adjacent to her own.

Unless otherwise specified, all employees maintain silence while in their offices.

41. The best location for Mr. White is in office.

(A) 1
(B) 2
(C) 3
(D) 4
(E) 6

42. The best employee to occupy the office furthest from Mr. Black would be.

(A) Mr. Allen
(B) Miss. Braun
(C) Miss. Green
(D) Mr. Parker
(E) Mr. White

43. The three employees who smoke should be placed in offices.

(A) 1, 2, and 3
(B) 1, 2 and 4
(C) 1, 2 and 6
(D) 2, 3 and 4
(E) 2, 3 and 6

44. Which of the following events, occurring one month after the assignment of offices, would be most likely to lead to a request for a change in office assignment by one or more employees?

(A) Miss Braun's deciding that she needs silence in the office adjacent to her own.
(B) Mr. Black's contracting laryngitis.
(C) Mr. Parker's giving up smoking.
(D) Mr. Allen's taking over the duties formerly assigned to Miss Braun.
(E) Miss. Green's installing a noisy teletype machine in her office.

Excessive amounts of mercury in drinking water, associated with certain types of industrial pollution, have been shown to cause Hobson's disease. Island R. has an economy based entirely on subsistence level agriculture; modern industry of any kind is unknown. The inhabitants of Island R. have an unusually high incidence of Hobson's disease.

45. Which of the following can be validly inferred from the above statements?

I. Mercury in drinking water is actually perfectly safe.
II. Mercury in drinking water must have sources other than industrial pollution.
III. Hobson's disease must have causes other than mercury in drinking water.

(A) II only
(B) III only
(C) I and II only
(D) I and III only
(E) II and III only.

Those who oppose the new water project claim to have the best interests of this community at heart. Yet they are the same people who, only three years ago, opposed the building of the new state highway, which now provides half a million commuters with fast, easy motoring every day. What could be a better argument in favor of the water project?

46. Which of the following statements is most like the argument above?

(A) Those who oppose nuclear power are unable or simply unwilling to recognize the fact that the nuclear energy industry has a safety record unparalleled by that of any other industry.
(B) The new gun control law is a misguided and dangerous proposal, which has been denounced by every sportsman's club and gun-owner's association in the state.
(C) We must fight the proposed anti-pornography statute, for its principal sponsors have voted against every major piece of women's rights legislation introduced in the last twenty years.
(D) The polls show that over 60% of the concerned parents in the state favor the school bond issue; cast your vote with the concerned majority on election day.
(E) The so-called tax reform bill now before the state senate must be defeated; its only true beneficiaries would be the wealthy corporations, which already pay too little in taxes.

The office staff of the XYZ Corporation presently consists of three bookkeepers (A, B, and C) and five secretaries (D, E, F, G and H). Management is planning to open a new office in another city using three secretaries and two bookkeepers of the present staff. To do so they plan to separate certain individuals who do not function well together. The following guidelines were established to set up the new office:

1. Bookkeepers A and C are constantly finding fault with one another and should not be sent as a team to the new office.
2. C and E function well alone but not as a team. They should be separated.
3. D and G have not been on speaking terms for many months. They should not go together.
4. Since D and F have been competing for promotion, they should not be a team.

47. If A is be moved as one of the bookkeepers, which of the following CANNOT be a possible working unit?

(A) ABDEH
(B) ABDGH
(C) ABEFH
(C) ABEGH
(D) ABFGH

48. If C and F are moved to the new office, how many combinations are possible?

(A) 1
(B) 2
(C) 3
(D) 4
(E) 5

49. If C is sent to the new office which member of the staff CANNOT go with C?

(A) B
(B) D
(C) F
(D) G
(E) H

50. Under the guidelines developed, which of the following MUST go to the new office?

(A) B
(B) D
(A) E
(B) G
(C) H

51. If D goes to the new office which of the following is (are) true?

I. C cannot go.
II. A cannot go.
III. H must also go.

(A) I only
(B) II only
(C) I and II only
(D) I and III only
(E) I, II, and III.

Fran: I want to stay out of Professor Caldwell's classes if I can. I've heard she's very strict when it comes to giving out the grades.
Sid: That's not true. My friend Phil took her class last year, and she gave her an A.

52. From the conversation above it can be inferred that Sid interpreted Fran's Statement to mean that Professor Caldwell.

(A) Makes unfair demands on her students
(B) Only gives good grades to a few favored students
(C) Has become increasingly strict in her grading over the past year.
(D) Gives out fewer good grades than most teachers in the department.
(E) Never gives out grades of A.

The nursing shortage in this country is a funny one, caused by the concentration of nurses in the geographical regions with the highest paid and most generous fringe benefits for nurses. In addition, the League of America Nurses has artificially worsened the shortage by encouraging nursing schools to keep enrollments low in order to boost nurses salaries to even higher levels.

53. All of the following statements, if true, would tend to WEAKEN the argument above except:

(A) Although nurses are paid less in Texas than in Connecticut, there are 35% more nurses in Texas than in Connecticut.
(B) Nationwide, the salaries of nurses have risen at a slower rate than inflation over the last ten years.
(C) The number of students who earned degrees in nursing last year was almost double the number six years ago.
(D) Those areas of the country with the highest pay for nurses also have correspondingly higher living costs.
(E) The League of American Nurses has almost no influence on the policies of American nursing schools.

After months of talent searching for an administrative assistant to the president of the college the field of applicants has been narrowed down to five (A, B, C, D, and E). It was announced that the finalist would be chosen after a series of all-day group personal interview were held. The examining committee agreed upon the following procedure:

(1) The interviews will be held once a week.
(2) Three candidate will appear at any all-day interview session.
(3) Each candidate will appear at least once.
(4) If it becomes necessary to call applicants for additional interviews, no more than one such applicant should be asked to appear the next week.
(5) Because of a detail in the written applications, it was agreed that whenever Candidate B appears, A should also be present.
(6) Because of travel difficulties, it was agreed that C will appear for only one interview.

54. At the first interview, the following candidates appear A, B, and D, which of the following combinations can be called for the interview to be held the next week?

(A) BCD
(B) CDE
(C) ABE
(C) ABC
(D) ADE

55. Which of the following is a possible sequence of combinations for interviews in two successive weeks?

(A) ABC; BDE
(B) ABD; ABE
(C) ADE; ABC
(D) BDE; ACD
(E) CDE; ABC

56. If A, B, and D appear at the interview and D is called for an additional interview the following week, which two candidates may be asked to appear with D?

I A
II B
III C
IV E

(A) I and II
(B) I and III only
(C) II and III only
(D) II and IV only
(E) III and IV only

57. Which of the following correctly state(s) the procedure following by the search committee?

I After the second interview, all applicants have appeared at least once.
II The committee sees each applicant a second time.
III If a third session is held it is possible for all applicants to appear at least twice.

(A) I only
(B) II only
(C) I and II only
(D) III only
(E) I and III only.

To obtain a government post in the Republic of Malabar, you must either be a member of the ruling Independence Party or a personal associate of President Zamir. Party members seeking a government post must either give a substantial donation in gold bullion to the party's campaign fund or make a televised speech denouncing President Zamir's political enemies.
Gold bullion may be purchased only at the National Bank, which does business only with those who have been certified as politically sound by the Minister of Justice.

Only those who either have been certified as politically sound by the –Minister of Justice or have donated 300 hours of service to the Independence Party are allowed to make political speeches on t e l e v i s i o n .
To become a personal associate of President Zamir, you must either give a substantial donation in gold bullion to the president's personal expense account or perform personal services for a member of his immediate family. Before appointing a personal associate to a government post, President Zamir always checks to make sure that he or she has been certified as politically sound by the Minister of Justice.

58. Mr. Mizar is a member of the Independence Party
To obtain a government post, his next step must be to either.

(A) be certified as politically sound by the Minister of Justice, or give a substantial donation in gold bullion to the party's campaign fund
(B) donate 300 hours of service to the Independence Party, or give a substantial donation in gold bullion to the president's personal expense account.
(C) Be certified as politically sound by the Minister of Justice, or donate 300 hours of service to the party.
(D) Perform personal services for a member of President Zamir's immediate family, or make a televised speech denouncing the president's political enemies.
(E) be certified as politically sound by the Minister of Justice, or become a personal associate of President Zamir.

59. All those who wish to obtain government posts must

I. Become personal associates of President Zamir
II. Be certified as politically sound by the Minister of Justice.
III. Purchase gold bullion at the National Bank.

(A) I only
(B) II only
(C) III only
(D) II and III only
(E) Neither I, II, nor III

60. Mr. Razim has been certified as politically sound by the Minister of Justice. He may obtain a government post immediately only if he.

(A) Has donated 300 hours of service to the Independence Party.
(B) Is allowed to make political speeches on television?
(C) Is a member of the Independence Party?
(D) Is a personal associate of President Zamir?
(E) Has purchased gold bullion at the National Bank.

61. Because of a financial crisis, the National Bank is closed indefinitely. Those who wish to obtain government posts during this period must\

(A) Either perform some kind of services or make televised speeches denouncing President Zamir's political enemies.
(B) Become members of the Independence Party
(C) Donate 300 hours of service to the Independence Party.
(D) Become personal associates of President Zamir
(E) Either become members of the Independence Party or perform any services for the party.

In a laboratory study, 160 rabbits in an experimental group were injected with Serum D. While 160 rabbits in a control group were injected with a harmless sugar solution within two weeks, 39% of the experimental group rabbits had contracted jungle fever, a highly contagious and usually fatal disease. Therefore, jungle fever must be caused by some substance similar to the substances found in Serum D.

62. The above argument would be most greatly strengthened if it were shown that.

(A) The normal rate of jungle fever among rabbits is less than 0.01%
(B) 40% of the rabbits in the control group had also contracted jungle fever within two weeks.
(C) Serum D contains substances extracted from the root of a certain poisonous jungle wildflower.
(D) The blood of jungle fever victims invariably contains a high level of a certain toxic substance also found in Serum D.
(E) Nearly all the rabbits who contracted jungle fever died within two days of the appearance of the first symptoms.

63. The above argument would be most seriously weakened if it were shown that,

(A) None of the substances in Serum D occurs naturally in the habitats of most species of rabbit
(B) The rabbits in the experimental group had been kept strictly isolated from one another.
(C) Jungle fever is usually found only among victims of the bite of the South American Lesser Hooded Viper.
(D) The scientists administering the injections were unaware of the contents of the solutions they were using.
(E) One of the rabbits in the experimental group had jungle fever prior to the start of the experiment.

Now Mesa Electronics brings tomorrow's technology to today's home stereo. The same space-age circuitry used by the Wanderer spacecraft to send images of the most distant planets back to earth has been incorporated in the new Mesa X-2700 stereo system. If your home entertainment is important to you, why settle for an old-fashioned stereo system when the Mesa X-2700 is priced at only a few dollars more?

64. The most serious logical weakness of this argument is its failure to

(A) Provide technical data on the manufacturing specifications of the Mesa X-2700.
(B) Show the relevance of space-age circuitry to the requirements of home stereo.
(C) Specify the exact price difference between the Mesa X-2700 and old-fashioned stereo systems.
(D) Acknowledge the contributions of scientists in the space program to the development of the advanced circuitry mentioned.
(E) Explain the precise meaning of the technical terms used.

Professor Kittredge's literature seminar includes students with varied tastes in poetry.
All those in the seminar who enjoy the poetry of Browning also enjoy the poetry of Eliot.
Those who enjoy the poetry of Eliot despise the poetry of Coleridge.
Some of those who enjoy the poetry of Eliot also enjoy the poetry of Auden.
All those who enjoy the poetry of Coleridge also enjoy the poetry of Donne.
Some of those who enjoy the poetry of Donne also enjoy the poetry of Eliot.
Some of those who enjoy the poetry of Auden despise the poetry of Coleridge.
All those who enjoy the poetry of Donne also enjoy the poetry of Frost.

65. Miss Garfield enjoy the poetry of Donne. Which of the following must be true?

(A) She may or may not enjoy the poetry of Coleridge.
(B) She does not enjoy the poetry of Browning.
(C) She enjoys the poetry of Auden.
(D) She does not enjoy the poetry of Eliot.
(E) She enjoys the poetry of Coleridge.

66. Mr. Huxtable enjoys the poetry of Browning. He may also enjoy any of the following poets except.

(A) Auden.
(B) Coleridge.
(C) Donne.
(D) Eliot.
(E) Frost.

67. Miss. Inaguchi enjoys the poetry of Coleridge. Which of the following must be false?

(A) She does not enjoy the poetry of Auden.
(B) She enjoys the poetry of Donne.
(C) She enjoys the poetry of Frost.
(D) She does not enjoy the poetry of Browning.
(E) She may enjoy the poetry of Eliot.

68. Based on the information provided, which of the following statements concerning the members of the seminar must be true?

(A) All those who enjoy the poetry of Eliot also enjoy the poetry of Browning.
(B) None of those who despise the poetry of Frost enjoy the poetry of Auden.
(C) Some of those who enjoy the poetry of Auden despise the poetry of Coleridge.
(D) None of those who enjoy the poetry of Browning despise the poetry of Donne.
(E) Some of those who enjoy the poetry of Frost despise the poetry of Donne.

A certain city is served by six subway lines, designated by the letters, A, B and C and the number 1, 2, and 3.
When it snows, morning service on the B line is delayed.
When it rains or snows, service on the A, 2 and 3 lines is delayed both morning and afternoon.
When the temperature drops below 30°F, afternoon service is cancelled on either the A line or the 3 line, but not both.
When the temperature rises above 90°F, afternoon service is cancelled on either the C line or the 3 line, but not both.
When service on the A line, is delayed or cancelled, service on the C line, which connects with the A line, is delayed.
When service on the 3 line is cancelled, service on the B line, which connects with the 3 line, is delayed.

69. On January 10, with the temperature at 15°F, it snows all day. On how many lines will service be affected, including both morning and afternoon?

(A) 2
(B) 3
(C) 4
(D) 5
(E) 6

70. On August 15, with the temperature at 97°F, it begins to rain at 1.P.M. What is the minimum number of the lines on which service will be affected?

(A) 2
(B) 3
(C) 4
(D) 5
(E) 6

71. On which of the following occasions would service on the greatest number of lines be disrupted?

(A) A snowy afternoon with the temperature at 45°F
(B) A snowy morning with the temperature at 45°F.
(C) A rainy morning with the temperature at 45°F.
(D) A snowy afternoon with the temperature at 20°F
(E) A rainy afternoon with the temperature at 95°F.

Seven candidates in a gubernatorial primary election are to speak at a voters' forum. They are named Johnson, Kelleher, Lindsay, Macmillan, Nevins, Oberlander, and Pankhurst and currently hold the offices of lieutenant governor, attorney general, state comptroller, U.S. Senator, highway commissioner, county supervisor, and schools superintendent, though not necessarily in that order.
The third speaker will be the highway commissioner Macmillan, who is not the county supervisor, will speak after the speaker who immediately follows Nevins.
Johnson is the state comptroller.
The lieutenant governor will speak sixth.
The attorney general will speak immediately before the county supervisor.
Pankhurst will speak immediately after Oberlander and immediately before Kelleher.
Schools Superintendent Nevins will speak fifth.

72. The first speaker will be.

(A) Oberlander
(B) The state comptroller
(C) Pankhurst
(D) The county supervisor.
(E) Lindsay.

73. The speaker who immediately precedes Macmillan will be.

(A) The highway commissioner.
(B) Johnson
(C) The lieutenant governor
(D) Kelleher
(E) The county supervisor.

74. Which of the following correctly pairs a speaker with his or her current office?

(A) Oberlander – U.S. Senator.
(B) Kelleher – highway commissioner
(C) Lindsay – county supervisor
(D) Pankhurst – lieutenant governor
(E) Macmillan – attorney general.

75. Before the forum, Pankhurst drops out of the race, while a new candidate, Quigley, enters the race. If Pankhurst is dropped from the forum, while Quigley is added in the slot immediately after Lindsay, the sixth s peaker will be

(A) Kelleher
(B) Johnson
(C) Nevins
(D) Quigley
(E) Macmillian

76. If, in addition to the changes described in question 35, the highway commissioner and the U.S. Senator agree to exchange positions in the speaking schedule, which of the following will be true?

(A) Macmillan will speak after Oberlander and before Johnson.
(B) Kelleher will be the only candidate to speak after Lindsay.
(C) There will be an equal number of speakers before and after Johnson.
(D) Only one candidate will speak after Nevins and before Kelleher.
(E) The first and last speakers will not be changed.

A certain baseball team has four pitchers, named Miller, Craig, Hook, and Mizell. Each of the four is best known for throwing one type of pitch: fastball, curve ball, slide, or screwball.
Each of the four also uses a particular style of delivery in pitching: overhand, three – quarter, sidearm, or underhand.

Hook is best known for throwing the slider.
Neither Craig nor Mizell uses a three-quarter style of delivery.
The pitcher who uses an underhand delivery is best known for throwing the fastball.
Mixell is best known for throwing the screwball.
Miller uses an overhand delivery.

77. Which of the following correctly matches a pitcher with his best-known pitch and his style of delivery?

(A) Miller-curve ball-three-quarter.
(B) Hook-slider-side arm.
(C) Craig-fastball-underhand
(D) Mizell-curve ball-underhand.
(E) Miller-screwball-sidearm.

78. During a game, if the starting pitcher is ineffective, he will be replaced by another pitcher. All of the following are possible pitching changes except.

(A) The curve ball pitcher being replaced by the pitcher who uses and overhand delivery.
(B) The screwball pitcher being replaced by Hook.
(C) Miller being replaced by the fastball pitcher
(D) The slider pitcher being replaced by the pitcher who uses a sidearm delivery.
(E) Craig being replaced by the curve ball pitcher.

79. In a four-game series, the manager of the team decides to pitch the fastball pitcher first the, the pitcher who uses a three-quarter delivery second, the curve ball pitcher third, and the pitcher who uses a sidearm delivery fourth. In which order will the pitchers appear?

(A) Mizell, Craig, Miller, Hook.
(B) Craig, Hook, Miller, Mizell.
(C) Miller, Craig, Hook, Mizell.
(D) Craig, Miller, Mizell, Hook.
(E) Miller, Hook, Mizell, Craig.

As President of the National Association of Widget Manufacturers, I oppose government handouts to private business. But the present program of federal aid to the widget industry must continue. This is not a handout but rather a system of moderate cash subsidies to enable our beleaguered industry to withstand the shocks of rising costs and high interest rate, and so continue to provide useful employment to thousands of U. S citizens.

80. The major logical weakness of the argument above is the fact that.

(A) The speaker is arguing against his own personal interest
(B) It makes on attempt to explain the ultimate causes of rising costs and high interest rates.
(C) It draws no meaningful distinction between handouts and subsidies.
(D) It does not explain the significance of the widget industry for the U.S. economy as a whole.
(E) It offers no factual evidence to substantiate the claim that the widget industry , is in danger.

81. Which of the following persons would be most likely to disagree with the conclusions reached in the above argument?

(A) The president of a medium-sized widget manufacturing firm.
(B) The patentee of a new device designed to a make the widget obsolete.
(C) The federal administrator charge with coordinating the widget industry subsidy program.
(D) A congressional representatives from a district containing several large widget manufacturing plants.
(E) The president of the national widget industry employees union.

82. Leafleting and speechmaking on government property should be outlawed. Radicals and fanatics have no right to use public property when peddling their unsavory views.
The argument above is based on the assumption that

(A) Radicals and fanatics prefer using public property when disseminating their views.
(B) Legal restrictions that apply to one group need not apply equally to all.
(C) The general public has a vested interest in the free exchange of varied political views
(D) Political activity that interferes with the orderly functioning of government should not be protected by law.
(E) All those who leaflet and make speeches on government property are radicals and fanatics

The high level of violence in children's television programming today has often been cited as an explanation for the increased violence in our society as a whole. And, in fact, some recent studies show that the level of TV violence has increased considerably over the past twenty years. However, other studies indicate that the level, while high, is only slightly greater than it was twenty years ago.

83. All of the following, if true, would be useful in explaining the above EXCEPT

(A) Numerous studies of TV violence have been conducted in the past twenty years, and their results were not always in agreement.
(B) All those involved in conducting the studies cited had the same perception of what constitutes "violence" in TV. programming
(C) Despite their best efforts at impartiality those who conduct studies of TV violence sometimes allow their preconceived ideas to affect their findings.
(D) Many factors other than TV violence have a significant effect on the level of violence in society.
(E) The methodology generally used in studies of TV violence has changed considerably over the past twenty years.

The United States, which was founded mainly by people who had emigrated from Northern Europe, had an essentially open-door immigration policy for the first 100 years of its existence. But starting in the 1880s and continuing through the 1920s, Congress passed a series of restrictive laws that led, ultimately, to a quota system for immigration based on the number of individuals of each national origin reported in the 1890 census.

84. All of the following, if true, would help account for the above EXCEPT.

(A) The American economy was weak in the 1880s, and many Americans were afraid that new immigrants would further weaken it.
(B) Political upheavals in Europe in the late nineteenth century encouraged many left-wing radicals to emigrate to America.
(C) Most of those emigrating to America in the 1880s were central and eastern Europeans, against whom many Americans were prejudiced.
(D) Throughout American history, most Americans have been sympathetic toward those living under repressive regimes in Europe and seeking refuge abroad.
(E) Most of the U.S. population in the 1880s were members of Protestant churches, while many of the new immigrants were Catholics and Jews

Prior to the development of the "horseless carriage" around the start of the twentieth century, horses in our cities left tons of unsightly, messy and malodorous manure on our streets. Based on this fact alone there is no question that by any measure, the automobile has been a boon to humankind.

85. Which of the following, if true, most seriously weakens the argument above?

(A) Air pollution caused by automobile exhaust is less deleterious to health than that caused by horse manure.
(B) In the nineteenth century, almost as many people were killed each year by horse-drawn conveyances as are killed today by automobiles.
(C) In many cities, automobile traffic has been banned from large downtown area to provide room for pedestrian malls.
(D) Compared to horse-drawn carriages, automobiles are less efficient in terms of the energy required to operate them.
(E) Automobiles enable people to travel greater distances in less time than did horse-drawn conveyances.

A recent study showed that parents whose children under the age of ten go to bed by nine o' clock in the evening have sexual relations an average of three times a week, while those whose children under ten do not go to bed until ten o'clock do so only once a week on average. Clearly, then, there is a cause-and-effect relationship between children's bedtime and their parents' level of sexual activity.

86. Knowledge of which of the following would be LEAST useful in evaluating the claim made in the passage above?

(A) The number of families that participated in the study.
(B) Whether the study differentiated between parents in their twenties, thirties, and forties
(C) The parents' level of sexual activity prior to the birth of their children.
(D) Whether any of the parents in the study had additional children over ten years of age.
(E) Whether the study differentiated between those parents who had to get up early in the morning and those who could sleep late.

Six varieties of exotic birds are to be housed in a zoo. The birds- varieties J, Q, S, V, X, and Z—will be housed one variety to a cage in two rows of three cages, which face each other across Aviary Place. The cages in the row on the West Side of every Place are numbered 1, 2 and 3 from north to south; the cages on the east side are numbered 4, 5,and 6 from north to south.
Variety V is housed in cage 5.
Varieties S and X must be housed in cages that face one another.
Varieties J and Q must be housed in different rows.

87. Which of the following is an acceptable housing arrangement for the six varieties of birds in the six cages, listed in numerical order?

(A) J, Z, Q, X, V, S
(B) Q, Z, V, J, X, S
(C) S, Q, Z, X, V, J
(D) S, X, J, Z, V, Q
(E) X, Q, Z, J, V, S

88. If variety S is housed in cage 4 and variety Q is housed in cage 3, which of the following must be true?

(A) Variety J is housed in cage 2.
(B) Varieties J and X are housed in cages that face one another.
(C) Variety Q is housed in a cage next to variety X.
(D) Variety S is housed in a cage that faces variety J.
(E) Variety Z is housed in a cage between varieties Q and X.

89. If variety z is housed in cage 1 and variety X is housed in a cage next to variety V, which of the following must be true?

(A) Variety J is housed in cage 2.
(B) Variety Q is housed on the east side.
(C) Variety S is housed in cage 3
(D) Variety S is housed on the west side.
(E) Variety X is housed in cage 4

90. In how many different cages could variety Z possibly be housed?

(A) Two
(B) Three
(C) Four
(D) Five
(E) Six

Under current U.S. tax laws, while those with higher incomes theoretically pay a higher percentage of their earnings to the federal government, loopholes in the law often make it possible for the wealthy to pay less taxes than those with lower incomes. If the government created a flat tax, under which every citizen's income was taxed at the same rate and eliminated the loopholes, everyone would pay his fair share and the government would receive ample revenues.

91. If the statements above are true, which of the following must be true?

(A) Under a flat tax, all of the wealthy would pay higher taxes than they do at present.
(B) Under a flat tax, every wage earner would pay the same amount in taxes.
(A) Under a flat tax, the wealthy would not be able to use loopholes to avoid paying their share of taxes.
(B) Under a flat tax, the wealthy would bear a larger share of the government's expenses than the middle class.
(C) Under a flat tax, lower-income wage earners would pay less in income taxes than they do now.

Six rock and roll acts—N,P,R,T,V and Y- are to perform in two amphitheater concerts, one on Friday night and one on Saturday night. To assuage the performers' intense competitiveness, the sequence of acts for the two concerts will be randomly determined, with the following provisions.

The act that performs first on Friday night must perform fourth on Saturday night
The act that performs sixth on Friday night must perform third on Saturday night.
If act R performs first, act V must perform sixth.
If act P performs fourth, act T must perform second.
Acts N and Y may not perform consecutively in either order.

92 Which of the following is a possible sequence of acts for the Friday night concert?

(A) N, T, R, P, Y, V
(B) R, Y, T, P, V, N
(C) R, T, Y, N, P, V
(D) T, V, N, Y, P, R
(E) Y, R, V, P, T, N

93 If the sequence of acts on Friday night is Y, T, N, P, R and V which of the following is a possible sequence of acts on Saturday night ?

(A) N, V, R, Y, T, P
(B) R, T, V, Y, N, P
(C) T, R, V, Y, P, N
(D) T, Y, V, R, N, P
(E) V, T, R, Y, P, N

94. If the sequence of acts on Friday night is P, N, V, T, R, and Y, which of the following must be true about the sequence of acts on Saturday night?

(A) N performs first.
(B) R performs fourth.
(C) T performs second.
(D) If V performs first, N performs fifth.
(E) If V performs sixth, R performs first.

95 If P performs sixth on Friday night and, on Saturday night, T performs second and Y performs fifth, which of the following must perform first on Saturday night?

(A) N
(B) P
(C) R
(D) V
(E) It cannot be determined from the information provided.

At the end of the nineteenth century, most Americans lived in houses in rural areas and dogs were by far the most popular type of pet. Today, however, the majority of Americans live in urban apartments and more people keep cats than any other animal.

96. Which of the following conclusions is most strongly supported by the statements above?

(A) City life is more congenial than country life for people and their pets.
(B) Cats are more appropriate as pets for apartment dwellers than are dogs
(C) Today as compared to the past, more people prefer having cats as pets than dogs
(D) Dogs who live in city apartments are often unhealthy and unhappy
(E) Dogs have decreased in popularity due to city ordinances restricting the maintenance of pets in apartments.

An office building houses seven companies, known as C, D, E, F, G, H and K. Each floor of the building has space for exactly one company, and the building has a total of exactly seven floors, numbered from 1(lowest) to 7(highest).

Company G is three floors above company D.
Company F is one floor below company K
Company E is above company C.

97. Which of the following is a possible arrangement of companies in the building, from the seventh floor to the first?

(A) C, E, G, K, F, D, H
(B) E, C, K, F, G, H, D
(C) F, K, G, E, C, D, H,
(D) G, K, F, D, E, H, C
(E) H, E, K, F, G, C, D

98. If company H is on the seventh floor and company C is on the fifth floor, which of the following must be true?

(A) Company D is on the second floor.
(B) Company E is on the sixth floor.
(C) Company F is on the first floor.
(D) Company G is one floor above company F
(E) Company K is two floors below company H.

99. If company D is one floor above company K, company H could be on any of the following floors EXCEPT the

(A) First
(B) Third
(C) Fourth
(D) Sixth
(E) Seventh

100. If company F is two floors above company H, how many possible different arrangements of companies in the building are possible?

(A) Three
(B) Four
(E) Five
(C) Six
(D) Seven

ANSWER KEY

1.	E	35.	D	69.	D
2.	D	36.	D	70.	C
3.	C	37.	A	71.	B
4.	C	38.	B	72.	A
5.	E	39.	D	73.	C
6.	D	40.	B	74.	B
7.	A	41.	C	75.	D
8.	E	42.	D	76.	A
9.	D	43.	A	77.	C
10.	C	44.	D	78.	A
11.	A	45.	E	79.	B
12.	D	46.	C	80.	C
13.	C	47.	B	81.	B
14.	B	48.	A	82.	E
15.	A	49.	B	83.	B
16.	A	50.	B	84.	D
17.	A	51.	D	85.	D
18.	D	52.	E	86.	D
19.	D	53.	A	87.	C
20.	C	54.	B	88.	E
21.	A	55.	C	89.	E
22.	A	56.	E	90.	E
23.	A	57.	A	91.	C
24.	A	58.	C	92.	A
25.	D	59.	E	93.	C
26.	D	60.	D	94.	C
27.	E	61.	A	95.	A
28.	D	62.	D	96.	C
29.	A	63.	E	97.	D
30.	E	64.	B	98.	B
31.	C	65.	A	99.	B
32.	C	66.	B	100.	C
33.	C	67.	E		
34.	A	68.	C		

ANSWERS AND EXPLANATIONS

1. (E) From the conditions, we have:

IL 2M 3R 4A
R R
_ _ _ _ _ _ _ _ _ _
1 2 3 4 5 6 7 8 9 10
M = M
M A
L R

For this question, legal is on 5 and marketing is on 4. So the two marketing departments must be on floors

3 and 4 because they are on adjacent floors.

R M L R
_ _ _ _ _ _ _ _ _ _
1 2 3 4 5 6 7 8 9 10

We also know that marketing cannot be adjacent to acquisitions. Thus, floor 2 must be the third floor of research.

R R M M L R
_ _ _ _ _ _ _ _ _ _
1 2 3 4 5 6 7 8 9 10

Thus, acquisitions must occupy floors 6-9.

2. (D) In this case, we would have the following arrangement:

R A A L R
_ _ _ _ _ _ _ _ _ _
1 2 3 4 5 6 7 8 9 10

Which would leave two consecutive marketing floors and three floors of acquisitions for 5-9. But since acquisitions cannot be adjacent to marketing, as would result from this arrangement, this choice is not possible.

3. (C) F**or t**his question, we know :

R R A A R
_ _ _ _ _ _ _ _ _ _
1 2 3 4 5 6 7 8 9 10

In order for the marketing not to be adjacent to acquisitions, the four acquisitions floors have to be consecutive, i.e., floors 3-6, and legal must be on floor 7.

R R A A A A L M M R
_ _ _ _ _ _ _ _ _ _

1 2 3 4 5 6 7 8 9 10

4. (C) For this question, we have

~~R~~ ___ ~~R~~ ~~M~~ ~~M~~ ___ ____ ___ ___ ~~R~~
1 2 3 4 5 6 7 8 9 10

Since legal cannot be on an adjacent floor to research, legal cannot be on floors 2 or 9. Since marketing and acquisitions cannot be on adjacent floors, legal must be on floors 6

5. (E) for this choice, we would have :

~~R~~ ~~A~~ ~~A~~ ~~A~~ ~~A~~ ~~L~~ ~~M~~ ~~M~~ ___ ~~R~~
1 2 3 4 5 6 7 8 9 10

We could put acquisitions on floors 2-5 and floor 9 would be the third research floor.

6. (D) From the conditions, we can make the following notes :

~~Wedding~~ ~~Graduation~~

1 or more is Solid
1 or more is Solid

For each woman: ~~Wedding~~ = Graduation
If Wedding (red) Graduation (striped or polka-dotted)

As long as the solid-colored wedding dresses are not red, then all of the dresses could be solid colored, either green and blue. For example, If the wedding dress for the first woman is blue, then her graduation dress could be green or red. If her wedding dress is green, then her graduation dress could be either blue or green. And so on for the other three women. So there may be a total of four solid-colored graduation dresses.

7. (A) The only information we have is that two of the dresses for the wedding are red. This means that two of the dresses for the graduation must be either polka dot or tripped. One of the remaining wedding dresses can be any fabric, as long as the fourth is not red (So that a graduation dress can be solid)

8. (E) For this choice, we have

~~Wedding~~ ~~Graduation~~

~~R~~ ~~R~~ ~~S~~ ~~P~~ ~~P~~ ~~B~~

1 2 3 1 2 3

All the other choices have flaws. For this choice, since the dresses for the wedding for the first two women are red, their dresses for the graduation are polka dot and polka dot. Since there needs to be a

solid-coloured dress for the graduation, the third dress is solid blue.

9. (D) if the three women all order red dresses for the wedding, then they all must have either polka dots or striped dresses for the graduation. This means that no woman has a solid-colored dress for graduation, which was one of the requirements.

10. (C) Since there are no red dresses made, and there has to be at least one solid-colored dress made for each occasion, either blue dresses or green dresses, or both, must be made for that occasion.

11. (A) From the conditions, we have
C # 2; B.. D; B...E; A -D
The band must tour Boston before they tour Evanston. Thus, Evanston cannot be toured first.

12. (C) If the band tours Albany first, then they must tour Detriot third. Since they must tour Boston before they tour Detroit, Boston must be toured second.

13. (C) We arrive at this answer by eliminating all the other choices. The band can tour Boston third since there is time for the band to tour Detroit and Evanston afterward. Albany can be toured third if Evanston is toured fifth. Detroit and Evanston can both be toured third as long as Boston is toured before. Finally, Chicago can also be toured third.

14. (B) Since we know that the band toured Albany immediately before they toured Chicago, we know that they toured Albany, Chicago and Detroit one after each other in that order. Since the band must tour Boston before they tour Detroit, they must also tour Boston before they tour Albany and Chicago. Since the band must tour Boston before they tour Evanston, Boston must be toured first.

15. (A) We arrive at this answer by eliminating all the other choices. For this choice, Two possible schedule could be :

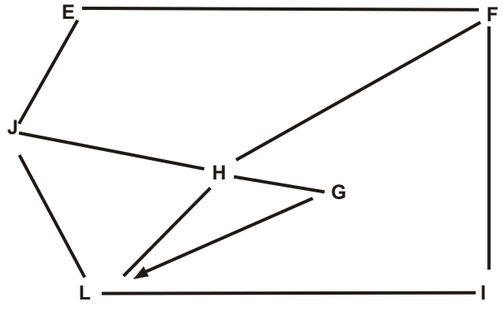
A	B	D	E	C
1	2	3	4	5

AND

C	A	B	D	E
1	2	3	4	5

16. (A) The band must tour Albany two cities before they tour Detroit. Thus, If they tour Detroit last, or Fifth, then they must tour Albany third.

17. (A) From the description of the Ski resort, we can construct t he following diagram of the ski trails:



In order to reach the Gorge, the skier must pass by Heavenly. The two shortest paths from the Ice Palace to Heavenly are either I L H or I F H. Since the lodge and then Heavenly is not one of the choices, the

correct choice is Frost Forest and then Heavenly.

18. (D) As you can see, the shortest route from Joker's Peak to ice Palace is going directly through the lodge, which is the one and only intermediate stop. All the other routes involve at least two stops.

19. (D) Since the skier cannot go directly from the lodge to the gorge, the shortest path she can take to reach both Joker's Peak and the Gorge from the Lodge is L J H G. Any other way would require more stops than that. Thus, Joker's Peak and Heavenly are the first two stops, respectively.

20. (C) The shortest path involving going to the George and not through T is E J L I. Thus, her first two stops are Joker's peak and the Lodge.

21. (A) from the conditions, we have

No more than 3 same colour.
No more than 1 chartreuse.

If	C				W
	101	103	105	107	109
	If G . . . B		= > 2B		

We arrive at this answer by eliminating all the other choices. In this choice, house 101 is painted chartreuse, so there are no houses painted yellow. In addition, house 109 is painted white. There are no other rules that apply to this choice.

22. (A) If the first house is painted green, the rules require in such a case that, if any house is painted blue there be exactly two houses painted blue.

23. (A) in this question, we have :

C	T			W
101	103	105	107	109

Since the first house is painted chartreuse, yellow cannot be used to paint the houses. Thus, in order for the houses to use the most number of colors, houses 105 and 107 are painted using green and blue. However, if 105 is painted green and 107 is painted blue, then there must be another house that is painted blue. Thus, 105 must be painted blue and 107 is painted green.

24. (A), for this question, we have

T	C	G	.....	W
101	103	105	107	109

House 107 cannot be painted blue because if it is painted blue, then there must be another house

painted blue because house 105 (a lower-numbered house) is painted green.

25. (D) for this question, we have

~~Y~~ ~~Y~~ ___ ___ ~~W~~

101 103 105 107 109

If houses 105 and 107 are painted green and blue respectively, then there must be a second house that is painted blue.

26. (D) Chartreuse can be used to paint only one house. Since the second colour, which must be white, can only be used to paint up to three houses, it is impossible to paint all the houses with only two colours if just one house is painted chartreuse.

27. (E) Based on the conditions, you may have made the following notes:

B E
SUN MON TUES

F 3p.m.
A 4 p.m

C. D. on same day.

Choice (E) satisfies these requirements:

~~SUN MON TUES~~

3 p.m.	F	C	E
4 p.m.	B	D	A

An effective way of getting to this answer is to apply a fact from the original information to each of the choices, and eliminate those that violate that fact. Then try the next fact, and so on, until you have only one choice remaining — the correct choice.

28. (D) Since Brooke must meet on Sunday, and Carina and David want their lessons on the same day, their lessons must both be scheduled on Monday or both on Tuesday.

29. (A). From the question, we get

B E
SUN MON TUES
E

F 3p.m
A 4 p.m

C D on the same day

Therefore C and D must have their lessons on Monday as this is the only day open for two lessons. (Remember, B is taking one of the Sunday lessons.) Since F can only have a 3 p.m. lesson, this leaves A

for the Tuesday 4 p. m. lesson.

B E
SUN MON TUES

3p.m.	F	C/D	E
4p.m.	B	C/D	A

So Adam is the only one who can be scheduled for 4 p.m. on Tuesday.

30 (E) If Fred is scheduled for Tuesday at 3 p.m. this gives us :

B E
SUN MON TUES
F

F 3 p.m
A 4 p.m.

Since B will be taking one of the Sunday lessons, C and D must both be scheduled on Monday.

B E
SUN MON TUES

F 3 p.m.		C/D	F
A 4 p.m.		C/D	

That puts E in the Tuesday at the 4 p.m. slot.

SUN MON TUES

F 3 p.m.		C/D	F
A 4 p.m.		C/D	F

Which now means that A must be on Sunday at 4 p.m., and must be on Sunday at 3: p.m.

31. (C) From the conditions, We have

GS : A> B > C> D
BS : E > F> G > H

District 1 : B, F
District 2 : A, D, H
District 3 : C, E, G

Basket-weaving :	GS	GS	AND	1	2	3
	-	-	--	- - -	-	-	-
Fishing :	BS	BS	AND	1	2	3
	--	--	- - -	-	-	-

Responsible for a class = Largest in a workshop.

For this question, we know that G is the most experienced in the fishing workshop. Since there must be two Boy Scout leaders and only H is less experienced than G, H is the second teacher. The third teacher

must come from district 1 and must be a girl scout leader, so the third teacher is B.

32. (C) Because one leader from district 1 must teach in each workshop, and there are only two leaders from district 1 and there are two workshops, both of them, B and F, must teach in a workshop.

33. (C) If F and H are the two boy scouts teaching the fishing workshop, then the third teacher must come from district 3, and C is a valid choice.

34. (A) Two girl scout leaders, A and B, are teaching basket weaving. This means that the third teacher must come from district # 3 and G is a valid choice.

35. (D) If E is not teaching any workshops and D, F, and G are teaching the fishing workshop, then the teachers for the basket-weaving workshop must include B and C to satisfy the district requirements. Thus, C is not the most experienced girl scout leader and thus cannot be responsible for the workshop.

36. (D) The four possible original teachers for the fishing workshop are A, B, E, and H are from the same district, and since there must be two boy scout leaders teaching fishing, the three original teachers are B, E, and H, G can only replace E because they are from the same district. Thus, the new teachers are B, G and H. Since G is the more experienced of the boy scout leaders, he is responsible for the fishing workshop.

37. (A) The replacement must also be a girl scout leader and come from district 2, and the only choice to satisfy both is A. Since A has the most experience of the girl scout leaders, she is now responsible for the basket weaving workshop.

38. (B) From the conditions, we can make the following notes :

JP BD BF

At least 7 transferred

Each school gets at least 1

For this question we may set up a chart, showing that Mr. Davis goes to Allendale :

Allendale	Fleetwood
D	

Since Mr. Davis is the only male teacher assigned to Allendale, the male teachers who must be assigned in pairs must all go to Fleetwood (since seven teachers must be assigned, neither of the pairs may be let out);

Allendale	Fleetwood
D	J, P, B, F

Thus at least three of the male teachers are assigned: Mr. Davis, Mr. Peters and Mr. Barson.

39. (D) Since Ms. James and Mr. Peters must be assigned together, (B), (C) and (E) are impossible, Since

choice (A) does not assign Mr. Barson and Ms. Flint to the same school, the only valid choice is (D).

40. (B) And for this question, we may create a chart

Allendale	Fleetwood
B__	_____(_)D

Since F must go with B, and since D must be stored, we have :

Allendale	Fleetwood
B F	D _____ (_)

Since J and P must go together and neither of them going to Fleetwood would mean less than seven transfers, we have :

Allendale	Fleetwood
B F	D J P __ (_)

ANS 41 - 44

Miss green is definitely assigned to office #5. Since no smoker may be near Miss Green, either Miss Braun or Mr. Black are the only ones that may be near #5. Mr. Black cannot go to #6 because he must be close to Mr. White. He must therefore take Office #4 and give Miss Braun #6. Mr. White may have #3 and be close to Mr. Black. Messrs. Allen and Parker have yet to be assigned. At this point the two vacancies are #1 and #2. Mr. Parker cannot be near Mr. White, who often talks to Mr. Black. Mr. Parker should have #1 and leave #2 for Mr. Allen. The assignment of offices may be summarized as follows:

OFFICE N	STAFF MEMBER
1	Mr. Parker
2	Mr. Allen
3	Mr. White
4	Mr. Black
5	Miss Green
6	Miss Braun

41. (C) Observe summary chart.

42. (D) Observe summary chart.

43. (A) Observe summary chart.

44. (D) Mr. Allen is a smoker and cannot be near Miss Green. Who, because of seniority, must stay in #5. This would cause a complete change of assignment,

45. (E) 1 is denied by the statement that some forms of mercury cause Hobson's diseases. II mentions the mercury in drinking water that is associated with industrial pollution. It may be concluded that mercury may get into drinking water by some other means. III alludes to the fact that this island has no industrial wastes and yet has a high incidence of this disease

46. (C) The argument presented here against proposed legislation is based upon unrelated, earlier legislation. Linking the water project and the highway proposal is similar in logic to linking the anti-

pornography proposal and the earlier women's rights legislation.

This summary with dotted lines indicates combinations to avoid.

BOOKKEEPERS A B C

SECRETARIES D E F G H

47. (B) See Item #3

48. (A) Since C is going. A cannot go, leaving B as the second bookkeeper. To have three secretaries, you cannot use E with C, leaving only D,F,G and H. If D is used, F and G are ruled out. There is one and only one combination: F, G and H with C and B.

49. (B) If C goes you cannot use D. See explanation above.

50. (B) Bookkeepers B has no limitations. A cannot go with C. D cannot go with F or G. E cannot go with C. Although H has no limitations, he could be left in the old office with a combination of E, F and G. Another way of analyzing this question is to consider that to get two bookkeepers out of the three available ones, you must take either A or C, But not both.

51. (D) If D goes, the other two secretaries must be E and H, C cannot go with E.
Therefore, A and B are the bookkeepers.

52 (E) If the two professor is strict about grades she might possibly still make unfair demands (A) and also have favorites (B). It is possible that she acquired this tendency recently (C), It is possible that few of her students deserve good grades (D), but the fact that she NEVER gives out grades of A could quite possibly label her as being very strict when it comes to giving out grades.

53. (A) The statement in (A) may not weaken the argument. Texas is much bigger, more heavily populated state than Connecticut. Even though there are 35% more nurses in Texas than Connecticut, the lower salary in Texas may still cause fewer nurses to go there than would otherwise go.

54 (B) According to procedure item #4, only one candidate may appear on two subsequent weeks.

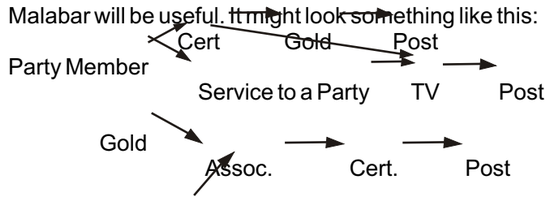
55. (C) (A) Violates items #5. (B) contradicts #4. (D) fails to consider #5. (E) does not take # 6 into account.

56 (E) (A) is not correct; see item #4. (B) is not correct because of Item #4. (C) and(D) contradicts item #5.

57. (A) Since there are five applicants and three appear at each session, after the second session all applicants must have made an appearance (I).

In solving this puzzle, a flow chart indicating the various steps which can lead to a government post in

Malabar will be useful. It might look something like this:



58 (C) As the chart shows, an Independent Party member has two possible routes to a government post. Therefore, as his next step, Mr. Mizar may either be certified by the Minister of Justice or donate 300 hours of services.

59. (E) To answer this question, check the chart to determine whether there is any step which is required by all routes to a government post. Since there is no such step, the correct answer is choice E. Note that statement II is not correct; It is possible for a party member to avoid having to be certified by the Minister of Justice by donating 300 hours of service to the party instead.

60. (D) As the chart shows, a personal associate of President Zamir who has been certified by the Minister of Justice is immediately eligible for a government post. Each of the other choices would leave some requirement unfulfilled. Choice E would be correct if Mr. Razim were known to be a party member, however, this is not stated. in the question.

61 (A) According to this question, all routes to a government post which require the purchase of gold bullion have been blocked off. The only remaining routes are : the Party Member – Cert. or Services – TV route; and the service—Assoc.—Cert. route. Both routes require either the performance of some kind of service or the making of the televised speech.

62 (D) The conclusion that some substance found in Serum D causes jungle fever would be greatly strengthened if the substance and the fewer were invariably found together, as stated in choice E. Choice A does not help to establish the cause E. Choice A does not help to establish the cause of the high rate of jungle fewer in the experimental group. Choice B would weaken the original argument, not strengthen it. Choices C and E would neither weaken nor strengthen the argument.

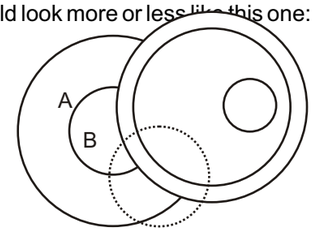
63 (E) Since we are told that jungle fever is a "highly contagious" disease, choice E suggests an alternative explanation for the high rate of jungle fever in the experimental group. Choice A is irrelevant, since we have no idea whether rabbits in general or any particular species of rabbits are frequent victims of jungle fever in the first place. Choice B would strengthen the argument, not weaken it.

64 (B) The force of the argument presented in this advertisement lies in the attractiveness of the promise of "space-age circuitry" in the X-2700 stereo system. Choice B effectively points out the fundamental weakness of this appeal. All the other choices present features of the advertisement which might be

regarded as the flaws, but which are very minor in comparison to the flaw indicated in choice B.

For 65 - 68

For a puzzle like this one, which relates various interlocking groups to one another, You'll need to draw a circle diagram showing the interrelationships of the groups named. Used solid lines to represent groups whose relationships are definitely established; use broken lines to represent groups about which some ambiguity exists. Your diagram should look more or less like this one:



65. (A) If Miss Garfield is within the circle labeled D (lovers of Donne), she may or may not be within the circle labeled C (lovers of Coleridge). Each of the other statements presents as definite fact something which may or may not be true.

66. As the diagram shows, the circle labeled B has no overlap with the circle labeled C Therefore; there are no Browning-lovers who are also Coleridge – lovers. Browning lovers may also enjoy Auden, Donne or Frost; they definitely enjoy Eliot, since the circle labeled B is entirely within the circle labeled E.

67. (E) All of the choices are possibly true, with the exception of choice E. Since the circle labeled C and the circle labeled E have no overlap. Miss Inaguchi definitely does not enjoy the poetry of Eliot.

68. (C) Since some Auden-lovers are Eliot-lovers and since all Eliot-lovers are Coleridge-despisers, there must be some Auden- lovers who are Coleridge –despisers.

69. (D) As shown by the second, third and sixth statements listed, the A, B, C, 2 and 3 lines will all be affected.

70. (C)The 97 degree temperature will cancel afternoon service on either the C or the 3 line. The rain will delay service on the A, 2 and 3 lines. When service on the A line is delayed, service on the C line is delayed. Therefore the C line and the 3 line are affected either way, and the delays on the 3 line are affected either way, and the delays on the A and the 2 lines raises to four the minimum number of lines affected.

71. (B) On a snowy morning with the temperature at 45degree F, the A,B,C, 2 and 3 lines will all be affected.

Under each of the other conditions mentioned. Only four lines will be affected.

FOR 72-76

Draw a chart providing spaces for the initials of the seven speakers along with abbreviations for the seven offices they hold. Start by filling in the most definite information provided, which is found in the second, fifth and eighth paragraphs. Your chart now looks like this:

SPEAKER		OFFICE
1.		
2.		
3.		H.C.
4.		
5.	N.	S.S.
6.		L.G.
7.		

The third paragraph tells us that Macmillan should be placed in the seventh spot in the line up. The sixth paragraph tells us that the attorney general will speak immediately before the county supervisor; however, looking at the chart, we see that the only two consecutive places still open are the first and the second, so that these two speakers must fit into those two openings. The chart now looks like this.

SPEAKER		OFFICE
1.		A.G.
2.		C.S
3.		H.C.
4.		
5.	N.	S.S.
6.		L.G.
7.	M.	

We can now put state comptroller Johnson into the fourth place in the line-up, since this is the only possible place for her. In addition, we know from the seventh paragraph that Oberlander, Pankhurst and Kelleher will speak in that order, and the chart now shows that the only three consecutive places still open are, the first, second and third places. Therefore, Oberlander, Pankhurst and Kelleher belong in those spots. By elimination, we can fill in the remaining slots. The questions are now easy.

72. (A) Read directly from the chart.

73. (C) Read directly from the chart.

74. (B) Read directly from the chart.

75. (D) If Pankhurst, in the second slot, drop out, those who originally were scheduled to speak third, fourth, fifth, sixth and seventh will now speak second, third, fourth, fifth and sixth. If Quigley is to speak following Lindsay, who is now the fifth speaker, Quigley will speak sixth.

76. (A) Chioce A is correct, since Macmillan will now be the second speaker, and will follow Oberlander and precede Johnson. Choice B is wrong, because Quigley will also speak after Lindsay (see question 35). Choice C is wrong, because only two speakers will precede Johnson but four will follow her. Choice D is wrong, Because Lindsay and Quigley will both follow Nevins and precede Kellcher. And choice C is

false because the last speaker was changed from Macmillan to Kellcher.
FOR 77-79

For this puzzle, you'll need a three-column chart listing pitchers, pitches and styles of delivery. The information given in the second, fourth, fifth and sixth paragraphs can be easily charted as follows:

PITCHER	PITCH	DELIVERY
H.	SI.	
F.	F.	U
Miz.	Sc.	
Mil.		O.

Now, using the process of elimination and the information in the third paragraphs, you can complete the chart like this:

PITCHER	PITCH	DELIVERY
H.	SI.	T.
C.	F	U.
Miz.	Sc	S.
Mil.	C	O.

All three questions can be answered by referring to this chart.

77. (C) Read directly from the chart.

78. (A) Choice A is impossible, because the curves ball pitcher and the pitcher who uses an overhand delivery are one and the same. This difficulty does not apply to any of the choices.

79. (B) Read directly from the chart.

80. (C)The only difference between the "handout" which the author deplores and the "subsides" he favors is the words used to describe them. In one case, the words used are negatively loaded; in the other hand, they are positive, or at least neutral. Choice A is directly contrary to fact. Choice B and C are true, but of minor importance. Choice D is probably false; the reference in the argument to the thousands of widget industry jobs does indicate the significance of the industry for the U.S. economy.

81. (B) The persons named in choices A, C, D, and E would all have an interest in the continuation of the widget industry subsidy program. The person named in choice B, however, would oppose outside help to an industry with which he or she is in direct competition.

82. (E) In this argument, the first sentence states the conclusion; the second sentences states the evidence. However, there is no real connection between the two statements unless the assumption given in choice E is accepted as valid.

83. (B). Each of the other answer statements could help to explain either the discrepancy between the various studies of TV violence or the apparent cause- and – effect relationship between TV violence and real-life violence. Only choice (B) does neither; instead , It sharpens the apparent contradiction among the various studies without helping to explain it.

84. The correct answer is (D). Choices (A), (B), (C) and (E) all help to account for the restrictions on immigration that were put in place starting in the 1880s. Choice (D) does not ; in fact, it suggests that

these restrictions are an anomaly in need of some explanation not provided in the passage.

85. The correct answer is (D). Choice (D) is the only answer that clearly suggests a drawback to our reliance on automobiles rather than horses for transportation.

86. (D) It seems irrelevant whether or not additional, older children are part of the same family. All of the other answer choices, however, raise issues that could be relevant to determining whether or not the study's conclusion is valid.

87. (C) Go through, the three rules, and compare each to the answer choices, eliminating those that violate a rule. Choice (B) violates the rule that says that variety V is housed in cage 5, Choices (A), (D), and (E) fail to put varieties S and X in cages facing one another. (Draw a little map. Cages 1 and 4, 2 and 5, and 3 and 6 faces each other.

88. (E) If S is in cage 4, then X must be in the cage 1. If Q is in cage 3, then J must be I cage 6 (the only cage in the opposite row still available). That leaves Z in cage 2. Map it like this:

X	S
Z	V
Q	J

Then just compare the answer choices with the map. Only choice (E) is true.

89. (E) Since S and X must be opposite one another, X must be in cage 6 and S must be in cage 3, Varieties J and Q are interchangeably housed in cages 2 and 4. Only statement (E) must be true under this conditions.

90 (B) We know that Z can't be in cage 5, since that's occupied by V,Z also can't be in cage 4 or cage 6. Why not? Because S and X must face one another, and J and Q must be in opposite rows. If Z is in either cage 4 or cage 6, that will leave no possible combination of four cages to house S, X, J and Q. So Z must be in a cage on the west side, giving that bird only three possible homes.

91 (C) Only this statement must be true given the information presented. Choice (D) is wrong because the truth of the statement would depend, in part, on how many wealthy people there are as compared to middle class people.

92. (A) Compare the five answer choices with the rules as stated. Only one another violates no rule. Choice (B) is wrong because it puts act V fifth, despite the fact that act R performs first. Choice (E) is wrong because if falls to put act T second, despite the fact that act P performs fourth. And choices (C) and (D) put acts N and Y together – a no-no.

93. (C) On Saturday night, Y must perform fourth (since Y performed first on Friday), and V must perform third (since V performed sixth on Friday). Since N and Y cannot perform consecutively, N may not perform fifth. These rather sketchy requirements suffice to eliminate four of the five answer choices.

94. (C) On Saturday night, Y must perform third, P must perform fourth, and (as a consequence of P's location) T must perform second.

95. (A) If P performs sixth on Friday, P performs third on Saturday. If Y is fifth and T is second on Saturday, then N must be first, since that's the only remaining locations in which N avoids performing before or after Y.

96. (C) The exact nature of the relationship between the shift from rural to urban living and the change in Americans' choice of pets can't be determined based simply on the information given. All we can tell is

that, in fact, more Americans are choosing cats as pets than dogs as pets

97. (D) Choices (B) and (E) both violate the rule that G must be three floors above D. Choice (C) illegally puts F above K. And choice (A) illegally puts C above E.

98. (B) If H is on the seventh floor and C is on the fifth floor, G must be on the fourth floor and D must be on the first floor (the only way they can be three floors apart). The other companies also fall inexorably into place, like this (from highest to lowest).: H, E, C, G, K, F, D.

99. (B) The condition stated puts companies D, K,and F on three floors together (highest to lowest) Since G must be three floors above D, we have this sequence of six floors (highest to lowest) :G, E, H, D, K, F. Now, G could be on either the seventh floor or the sixth floor. Depending on these two choices, there are several possible locations for the remaining companies C, E, and H. Only the third floor is impossible (of the five answer choices) : it must be occupied either by D or by K.

100. (C) The condition stated gives us two sequences that must exist in the building (from highest to lowest) ; G - - D, and K, F – H. These two sequences must interlock in one of two ways. They could interlock to form a sequence of five floors, as follows (highest to lowest); G, K, F, D, H, Or they could interlock to form a sequence of six floors : K, F, G, H, -, D.

Given the first of this possibilities, there are three variations possible (once the remaining companies, E and C, have been plugged in) : E, C, G, K, F, D, H, E, G, K, F, D, H, C; and G, K, F, H, E, C, Given the second possibility, there are two ways E and C could be plugged in: E, K, F, G, H, C, D; and K, F, G, H, E, D, C. Thus, there are five possibilities altogether.

Notice that this is clearly the hardest and most time-consuming question for this puzzle. If you found yourself spending a lot of time on it, you should have made a guess and moved on to the next item.

CRITICAL REASONING TEST

50 QUESTIONS
20 MINUTES

DIRECTIONS The following questions ask you to analyze evaluate the reasoning in short paragraphs or passages. For some questions, all of the answer choices may conceivably be answers to the question asked. You should select best answer to the question, that is, an answer that does not require you to make assumptions which violate common-sense standards by being implausible, redundant, irrelevant, or inconsistent.

1. I Whenever some of the runners are leading off and all of the infielders are playing in, all of the batters attempt to bunt.

   II Some of the runners are leading off but some of the batters are not attempting to bunt.

   Which of the following conclusions can be deduced from the two statements above?

   (A) Some of the runners are not leading off
   (B) Some of the batters are attempting to bunt.
   (C) None of the infielders is playing in.
   (D) All of the infielders are playing in.
   (E) Some of the infielders are not playing in.

2. The federal bankruptcy laws illustrate the folly of do-good protectionism at its most extreme. At the debtor's own request, the judge will list all of his debts, take what money the debtor has, which will be very little, and divide that small amount among his creditors. Then the judge declares that those debts are thereby satisfied, and the debtor is free from those creditors. Why, a person could take his credit card and buy a car, a stereo, and a new wardrobe and then declare himself bankrupt! In effect he will have conned his creditors into giving him all those things for nothing.
   Which of the following adages best describes the author's attitude about a bankrupt debtor?

   (A) "A penny saved is a penny earned"
   (B) "You've made your bed, now lie in it"
   (C) "Absolute power corrupts absolutely"
   (D) "He that governs least governs best"
   (E) "Millions for defense, but not one cent for tribute".

3. **MARY:** All of the graduates from Midland High School go to State College.

   ANN: I don't know. Some of the students at State College come from North Hill High School

   Ann's response shows that she has interpreted Mary's remark to mean that

   (A) most of the students from North Hills High School attend State College
   (B) none of the students at State college are from Midland High School
   (C) only students from Midland High School attend State College
   (D) Midland High School is a better school than north Hill High School
   (E) some Midland High School graduates do not attend college.

4. Total contributions by individuals to political parties were up 25 percent in this most recent presidential election over those of four years earlier. Hence, it is obvious that people are no longer as apathetic as they were, but are taking a greater interest in politics.

   Which of the following, if true, would considerably weaken the preceding argument?

   (A) The average contribution per individual actually declined during the same four-year period.

   (B) Per capita income of the population increased by 15 percent during the four years in question.

   (C) Public leaders continue to warn citizens against the dangers of political apathy.

   (D) Contributions made by large corporations to political parties declined during the four year period.

   (E) Fewer people voted in the recent presidential election than in the one four years earlier.

5. We must do something about the rising cost of our state prisons. It now costs an average of $225 per day to maintain a prisoner in a double-occupancy cell in a state prison. Yet, in the most expensive cities in the world, one can find rooms in the finest hotels which rent for less than $175 per night.

   The argument above might be criticized in all of the following ways EXCEPT

   (A) it introduces an inappropriate analogy

   (B) it relies on an unwarranted appeal to authority

   (C) it fails to take account of costs that prisons have but hotels do not have.

   (D) it misuses numerical data

   (E) it draws a faulty comparison

6. As dietitian for this 300-person school, I am concerned about the sudden shortage of beef. It seems that we will have to begin to serve fish as our main source of protein. Even though beef cost more per pound than fish, I expect that the price I pay for protein will rise if I continue to serve the same amount of protein using fish as I did with beef.

   The speaker makes which of the following assumptions?

   (A) Fish is more expensive per pound than beef.

   (B) Students will soon be paying more for their meals

   (C) Cattle ranchers make greater profits than fishermen

   (D) Per measure of protein, fish is more expensive than beef.

   (E) Cattle are more costly to raise than fish.

7. New Weight Loss Salons invite all of you who are dissatisfied with your present build to join our Exercise for Lunch Bunch. Instead of putting on even more weight by eating lunch, you actually cut down on your daily caloric intake by exercising rather than eating. Every single one of us has the potential to be slim and fit, so take the initiative and begin losing excess pounds today. Don't eat! Exercise! You'll lose weight and feel stronger, happier, and more attractive.

   Which of the following, if true, would weaken the logic of the argument made by the advertisement?

   (A) Nutritionists agree that it is permissible to skip lunch but it is not a good idea to skip breakfast.

   (B) Most people will experience increased desire for food as a result of the exercise and will lose little weight as a result of enrolling in the program.

   (C) In our society, obesity is regard as unattractive.

   (D) A person who is too thin is probably not in good health

   (E) Not everyone is dissatisfied with his or her present build or body weight.

8. Statistics published by the U.S. Department of Transportation show that nearly 80% of all traffic fatalities occur at speeds of under 50 mile per hour and within 25 miles of home. Therefore, you are safer in a car if you are driving at a speed over 50 miles per hour and not within a 25-mile radius of your home.

   Which of the following, if true, most weakness the conclusion of the argument above?

   (A) Teenage drivers are involved in 75% of all traffic accidents resulting in fatalities.

   (B) 80% of all persons arrested for driving at a speed over the posted speed limit are intoxicated.

   (C) 50% of the nation's annual traffic fatalities occur on six weekends that are considered high-risk weekends because they contain holidays.

   (D) The Department of Transportation statistics were based on police reports compiled by the 50 states.

   (E) 90% of all driving time is registered within a 25mile radius of the driver's home and that speeds less than 50 miles per hour.

9. Usually when we have had an inch or more of rain in a single day, my backyard immediately has mushrooms and other forms of fungus growing in it. There are no mushrooms or fungus growing in my backyard.

   Which of the following would logically complete an argument with the premises givens above?

   (A) Therefore, there has been no rain here in the past day.

   (B) Therefore, there probably has been no rain here in the past day.

   (C) Therefore, we have not had more than an inch of rain in the past day.

   (D) Therefore, mushroom and fungus will be growing in my backyard tomorrow.

   (E) Therefore, mushroom and fungus will be growing in my backyard tomorrow.

10. Since all swans that I have encountered have been white, it follows that the swans I will see when I visit the Bronx Zoo will also be white.

    Which of the following most closely parallels the reasoning of the preceding argument?

    (A) Some birds are incapable of flight; therefore, swans are probably incapable of flight.

    (B) Every ballet I have attended has failed to interest me, so a theatrical production which fails to interest me must be a ballet.

    (C) Since all cases of severe depression I have encountered were susceptible to treatment by chlorpromazine, there must be something in the chlorpromazine that adjusts the patients brain chemistry.

    (D) Because every society has a word for justice, the concept of fair play must be inherent in the biological makeup of the human species.

    (E) Since no medicine I have tried for my allergy has ever helped, this new product will probably not work either.

QUESTION 11-13

The blanks in the following paragraph mark deletions from the text. For each question, select the phrase that most appropriately completes the text.

Libertarians argue that laws making suicide a criminal act are both foolish and an unwarranted intrusion on individual conscience. With regard to the first, they point out that there is no penalty that the law can assess which inflicts greater injury than the crime itself. As for the second, they argue that it is no business of the state to prevent suicide, for whether it is right to take one's own life is a matter to be addressed to one's own God- the state, by the terms of the Constitutions, may not interfere. Such arguments, however, seems to me to be ill-conceived. In the first place, the libertarian makes the mistake assumption that deterrence is the only goal of the law. I maintain that the laws we have proscribing suicide are (11)

By making it a crime to take any life-even one's own- we make a public announcement of our shared conviction that each person is unique and valuable. In the second place, while it must be conceded that the doctrine of the separation of church and state is a useful one, it need not be admitted that suicide is a crime (12) .And here we need not have recourse to the possibility that a potential suicide might, if given the opportunity, repent of the decision. Suicide inflicts a cost upon us all: the emotional cost on those close to the loss of production of a mature and trained member of the society which falls on us all: and a cost to humanity at large for the loss of a member of our human community. The difficulty with the libertarian position is that it is an oversimplification. It assesses the evil of (13) .

11. (A) drafted to make it more difficult to commit suicide
    (B) passed by legislators in response to pressures by religious lobbying groups
    (C) written in an effort to protect our democratic liberties, not undermine them
    (D) important because they educate all to the value of human life
    (E) outdated because they belong to a time when church and state were not so clearly divided

12. (A) which does not necessarily lead to more serious crimes
    (B) without a victim
    (C) as well as a sin
    (D) which cannot be presented
    (E) without motive

13. (A) crimes only in economic terms
    (B) suicide only from the perspective of the person who commits suicide
    (C) laws by weight them against the evil of the liberty lost by their enforcement
    (D) the mingling of church and state without sufficient regard to the constitutional protections.
    (E) suicide in monetary units without proper regard to the importance of life.

14. All high-powered racing engines have stochastic fuel injection. Stochastic fuel injection is not a feature which is normally included in the engines of production-line vehicles.

    Which of the following conclusions can be drawn from these statements?

    (A) Passenger sedans do not usually have stochastic fuel injection
    (B) stochastic fuel injection is found only in high-power racing cars.
    (C) Car manufacturers do not include stochastic fuel injection in passenger cars because they fear accidents
    (D) Purchasers of passenger cars do not normally purchase stochastic fuel injection because it is expensive
    (E) Some passenger sedans are high-power racing vehicles.

15. During New York City's fiscal crisis of the late 1970s, government leaders debated whether to offer federal assistance to New York City. One economist who opposed to help out New York City every time it gets into financial problems?"

    The economist's question can be criticized because it

    (A) uses ambiguous terms.
    (B) assumes everyone else agrees New York City should be helped.
    (C) appeals to emotions rather than using logic.
    (D) relies upon second-hand reports rather than first-hand accounts.
    (E) completely ignores the issue at hand.

16. Some philosophers have argued that there exist certain human or natural rights which belong to all human beings by virtue of their humanity. But a review of the laws of different societies shows that the rights accorded a person vary form society to society and even within a society over time. Since there is no right that is universally protected, there are no natural rights.

    A defender of the theory that natural rights do exist might respond to this objection by arguing that

    (A) some human beings do not have any natural rights.
    (B) some human rights are natural while others derive from a source such as a constitution.
    (C) people in one society may have naturalrights which people in another society lack.
    (D) all societies have some institution that protects the rights of an individual in that society.
    (E) natural rights may exist even though they are not protected by some societies.

QUESTION 17 AND 18

The single greatest weakness of American parties is their inability to achieve cohesion in the legislature. Although there is some measure of party unity, it is not uncommon for the majority party to be unable to implement important legislation. The unity is strongest during election campaigns; after the primary elections, the losing candidates all promise their support to the party nominee. By the time the Congress convenes, the unity has dissipated. This phenomenon is attributable to the fragmented nature of party politics. The national committees are no more than feudallords who receive nominal fealty from their vassals. A member of congress builds power upon a local base. Consequently, a member is likely to be responsive to local special interest groups. Evidence of this is seen in the differences in lower houses. In the Senate, where terms are longer, there is more party unity.

17. Which of the following, if true, would most strengthen the author's argument?
    (A) on 30key issues, 18 of the 67 majority party member in the Senate voted against the party leaders.
    (B) on 30 key issues, 70 of the 305 majority party members in the House voted against the party leaders
    (C) on 30 key issues, over half the members of the minority party in both houses voted with the majority party against the leaders of the minority Party
    (D) of 30 key legislative proposals introduced by a president whose party controlled a majority in both houses, only four passed both houses.
    (E) of 30 key legislative proposals introduced by a president whose party controlled a majority in both houses, only four passed both houses.

18. Which of the following, if true, would most weaken the author's argument?
    (A) Members of Congress receive funds from the national party committee.
    (B) Senators vote against the party leaders only two-thirds as often as House members.
    (C) The primary duty of an officeholder is to be responsive to a local constituency rather than party leaders.
    (D) There is more unity among minority party member than among majority party members.
    (E) Much legislation is passed each session despite party disunity.

19. **ADVERTISEMENT:** When you enroll with Future Careers Business Institute (FCBI), you will have access to our placement counseling service. Last year, 92% of our graduates who asked us to help them find jobs found them. So go to FCBI for your future!

    The answer to which of the following questions is potentially the LEAST damaging to the claim of the advertisement?

(A) How many of your graduates asked FCBI for assistance?

(B) How many people graduate from FCBI last year?

(C) Did those people who asked for jobs find ones in the areas for which they were trained?

(D) Was FCBI responsible for finding the jobs or did graduates find them independently?

(E) Was the person reading the advertisement a paid, professional actor?

20. Either you severely punish a child who is bad or the child will grow up to be a criminal. Your child has just been bad. Therefore, you should punish the child severely.
All EXCEPT which of the following would be an appropriate objection to the argument?

(A) What do you consider to be severe punishment?

(B) What do you mean by the term "bad"?

(C) Isn't your "either-or" premise an over-simplification?

(D) Don't your first and second premises contradict one another?

(E) In what way has this child been bad?

21. Studies recently published in the Journal of the American Medical Association say that despite the widespread belief to the contrary, girls are just as likely as boys to have the reading impairment dyslexia. The new studies examined 450 children over a four-year period, from kindergarten through third grade. The research teams found that fewer than half the students referred to them for reading problems actually had them; and although the schools identified four times as many boys as girls as being dyslexic, independent testing by the research teams revealed that the impairment appeared in both sexes with equal frequency. Yet, over the past decades, elaborate research programs have been set up to find the biological basis for the presumed gender difference in developing dyslexia.

Which of the following, if true, best explains the seeming contradiction outlined above between the new research and the conventional sex-linked view of dyslexia?

(A) Many boys who have dyslexia are not identified as suffering any learning disability

(B) Many girls who do not have any learning impairment are incorrectly identified as having dyslexia.

(C) Earlier research was based entirely on subjects who were diagnosed by teachers as having reading problems.

(D) For years, the incidence of dyslexia has been under reported in school children of both genders.

(E) Learning disabilities are not likely to become evident until a child has reached the fourth grade.

QUESTION 22 AND 23

We should abolish the public education system and allow schools to operate as autonomous units competing for students. Students will receive government funds in the form of vouchers which they can then "spend" at the school of their choice. This will force schools to complete for students by offering better and more varied educational services. As in private industry , only the schools that provide customer satisfaction will survive. Since schools that cannot attract students will close, we will see an overall improvement in the quality of education.

22. The argument above rest on which of the following unsupported assumptions?

(A) Maximizing student and parent satisfaction also maximizes student learning

(B) In order to attracts students, all schools will eventually have to offer essentially the same curriculum.

(C) Giving students direct financial aid encourages them to study harder

(D) Schools should provide only educational services and not additional co-curricular or extra curricular activities.

(E) All education, both public and private, should be funded either directly or indirectly by government expenditures.

23. Which of the following, if true, would most undermine the argument above?

(A) Schools will make sure that all parents and students are thoroughly informed about the programs offered.

(B) Most students and parents will select a school based upon the convenience of its location.

(C) Students have different interest and different needs that can best be met by a variety of programs.

(D) By forcing school to operate on a cost-effective basis, a voucher program would actually reduce total educational expenditures.

(E) Financial barriers currently limit the educational choices of students from poorer families..

24. Though I am amateur athlete a long distance runner I have no love of the Olympic Games. The original purpose was noble, but the games have become a vehicle for politics and money. For example, when the media mention the 1980 winter games at Lake Placid, they invariably show footage of a hockey game. The real story of the 1980 games-Eric Hieden's winning five gold medals in speed skating is all but forgotten.

The speaker above implies that

(A) Eric Heiden was a better hockey player than speed skater.

(B) most people would prefer to watch speed skating over hockey.

(C) hockey produces money while speed skating does not.

(D) only professional athletes compete in the Olympic Games.

(E) amateur athletes are more exciting to watch than professional athletes.

25. Some judges are members of the bar. No member of the bar is a convicted felon. Therefore, some judge are not convicted felons.

Which of the following is logically most similar to the argument developed above?

(A) Anyone who jogs in the heat will be sick. I do not jog in the heat, and will therefore likely never be sick.

(B) People who want to avoid jury duty will not register to vote. A person may not vote until age 18. Therefore, persons under 18 are not called for jury duty.

(C) All businesses file a tax return, but many businesses do not make enough money to pay taxes. Therefore, some businesses do not make a profit.

(D) All non-students were excluded from the meeting, but some non-students were interested in the issues discussed. Therefore, some non-students interested in the issue are not allowed in the meeting

(E) The Grand Canyon is large. The Grand canyon is in Arizona. Therefore, Arizona is large.

QUESTION 26 AND 27

A study published by the Department of Education shows that children in the central cities lag far behind students in the suburbs and the rural areas in reading skills. The report blames this differential on the over-crowing in the class-rooms of city schools. I maintain, however, that the real reason that city children are poorer readers than non-city children is that they do not get enough fresh air and sunshine.

26. Which of the following best describes the forms of the above argument?

(A) It attacks the credibility of the Department of Education.

(B) It indicts the methodology of the study of the Department of Education.

(C) It attempts to show that central city students read as well as non-city students.

(D) It offers an alternative explanation for the differential.

(E) It argues from analogy.

27. Which of the following would LEAST strengthen the authors point the preceding argument?

(A) Medical research that shows a correlation between air pollution learning disabilities.

(B) A report by educational experts demonstrating that there is no relationship between the number of students in a classroom and a student's ability to read

(C) A notice released by the Department of Education retracting that part of their report that mentions overcrowding as the reason for differential

(D) The result of a federal program that indicates that city students show significant improvement in reading skills when they spend the summer in the country

(E) A proposal by the federal government to fund emergency programs to hire more teachers for central city schools in an attempt to reduce overcrowding in the classrooms.

28. Some judges have allowed hospitals to disconnect life-support equipment of patients who have no prospects for recovery. But I say that is murder. Either we put a stop to this practice now, or we will soon have programs of euthanasia for the old and infirm as well as others who might be considered a burden. Rather than disconnecting life-support equipment, we should let nature take its course.

All of the following are valid objections to the above argument EXCEPT

(A) it is internally inconsistent

(B) it employs emotionally charged terms

(C) it presents a false dilemma

(D) it oversimplifies a complex moral situation

(E) it appeals to authority not universally accepted

29. If Paul comes to the party, Quentin leaves the party. If Quentin leaves the party, either Robert or Steve asks Alice to dance. If Alice is asked to dance by either Robert or Steve and Quentin leave the party, Alice accepts. If Alice is asked to dance by either Robert or Steve and Quentin does not leave the party, Alice accept. If Alice is asked to dance by Robert or Steve and Quentin does not leave the parts, Alice does not accept

If Quentin does not leave the party, which of the following statements can be logically deduced from the information given?

(A) Robert asks Alice to dance.

(B) Steve asks Alice to dance.

(C) Alice refuses to dance with either Robert or Steve.

(D) Paul does not come to the party.

(E) Alice leaves the party.

30. All students have submitted applications for admission. Some of the applications for admission have not been acted upon.

Therefore, some more student will be accepted. The logic of which of the following is most similar to that of the argument above?

(A) Some of the barrels have not yet been loaded on the truck, but all of the apples have been put into barrels. So, some more apples will be loaded onto the truck.

(B) All students who received passing marks were juniors. X received a passing mark. Therefore, X is a junior,

(C) Some chemicals will react with glass bottles, but not with plastic bottles. Therefore, those chemicals should be kept in plastic bottles and not glass ones

(D) All advertising must be approved by the Council before it is aired. This television spot for a new cola has not yet been approved by the council. Therefore, it is not to be aired until the Council makes its decision.

(E) There are six blue marbles and three red marbles in this jar. Therefore, if I blindly pick out seven marbles, there should be two red marbles left to pick.

31. New Evergreen Hum has twice as much flavor for your money as Spring Mint Gum, and we can prove it. You see, a stick of evergreen Gum is twice as large as a stick of Spring Mint Gum, and the more gum, the more flavor.

Which of the following, if true, would undermine the persuasive appeal of the above advertisement?

(A) A package of Spring Mint Gum contains twice as many sticks as a package of Evergreen Gum

(B) Spring Mint Gum has more concentrated flavor than Evergreen Gum.

(C) A Stick of Evergreen Gum weights only 50% as much as a stick of Spring Mint Gum

(D) A package of Evergreen Gum costs twice as much as a package of Spring Mint Gum

(E) People surveyed indicated a preference for Evergreen Gum over Spring Mint gum

32. Judging from the tenor of the following statements and the apparent authoritativeness of their sources, which is the most reasonable and trustworthy?

(A) FILM CRITIC: Beethoven is really very much overrated as a composer. His music is not really that good; it's just very well known.

(B) SPOKESPERSON FOR A MANUFACTURER: the jury's verdict against us for $2million is ridiculous, and we are sure that the Appeals Court will agree with us.

(C) SENIOR CABINET OFFICER: Our administration plans to cut inefficiency, and we have already begun to discuss plans which we calculate will save the federal government nearly $50 billion a year in waste.

(D) FRENCH WINE EXPERT: The best buy wines in America today is the California chablis, which is comparable to the French chablis and is available at half the cost.

(E) UNION LEADER: We plan to stay out on strike until management each and every one of the demands we have submitted.

33. That it is impossible to foretell the future is easily demonstrated. For if a person should foresee being injured by a mill wheel on the next day, the person would cancel the trip to the mill and remain at home in bed. Since the injury the next day by the mill wheel would not occur, it cannot in any way be said that the future has been foretold.
Which of the following best explains the weakness in this argument?

(A) The author fails to explains how one could actually change the future.

(B) The author uses the word future in two different ways

(C) The author does not explain how anyone could foresee the future

(D) The argument is internally inconsistent.

(E) The argument is circular.

34. The Supreme Court's recent decision is unfair. It treats non-resident aliens as a special group when it denies them some rights ordinary citizens have. This treatment is discriminatory, and we all know that discrimination is unfair.

Which of the following arguments is most nearly similar in its reasoning to the above argument?

(A) Doing good would be our highest duty under the moral law, and that duty would be irrational unless we had the ability to discharge it; but since a finite creature could never discharge that duty in his lifetime, we must conclude that if there is moral law, the soul is immortal.

(B) Required core courses are a good idea because students just entering college do not have as good an idea about what constitutes a good education as do the professional educators; therefore, students should not be left complete freedom to select course work.

(C) This country is the most free nation on earth largely as a result of the fact that the founding fathers and the foresight to include a Bill of Rights in the Constitution.

(D) Whiskey and beer do not mix well every evening that I have drunk both whiskey and beer together, the following morning I have had a hangover.

(E) I know that is a beautiful painting because Picasso created only beautiful works of art, and this painting was done by Picasso.

35. Creativity must be cultivated. Artists, musicians, and writers all practice, consciously or unconsciously, interpreting the world from new and interesting viewpoints. A teacher can encourage his pupils to be creative by showing them different perspectives for viewing the significance of events in their daily lives.

Which of the following, if true, would most undermine the author's claim?

(A) In a well-ordered society, it is important to have some people who are not artists, musicians, or writers.

(B) A teacher's efforts to show a pupil different perspectives may actually inhibit development of the student's own creative process.

(C) Public education should stress practical skills, which will help a person get a good job, instead of creative thinking.

(D) Not all pupils have the same capacity for creative thought.

(E) Some artists, musicians, and writers "burn themselves out" at a very early age , producing a flurry of great works and then nothing after that.

36. Opponents to be mayor's plan for express bus lanes on the city's major commuter arteries objected that people could not be lured out of their automobiles in that way. The opponents were proved wrong; following implementation of the plan, bus ridership rose dramatically, and there was a corresponding drop in automobile traffic. Nonetheless, the plan failed to achieved its stated objective of reducing average commuting time.

Which of the following would be the most logical continuation of this argument?

(A) The plan's opponents failed to realized that many people would take advantage of improved bus transportation.

(B) Unfortunately, politically attractive solutions do not always get results.

(C) The number of people vehicle can transport varies directly with the size of the passenger compartment of the vehicle.

(D) Opponents cited an independent survey of city commuters showing that before the plan's adoption only one out of every seven used commuter bus lines.

(E) With automobile express lanes close to private automobile traffic, the remaining cars were forced to use too few lanes and this created gigantic traffic tie-ups.

37. Last year, Gambia received $42.5 billion in loans from the International Third World Banking Fund, and its Gross Domestic Product grew by 5%. This year Gambia has requested twice as much money from the ITWBF, and its leaders expect that Gambia's GDP will rise by a full 10%. Which of the following ,if true, would LEAST undermine the expectation s of Gambia's leaders?

(A) The large 5% increase of last year is attributable to extraordinary harvests due to unusually good weather conditions.

(B) Gambia's economy is not strong enough to absorb more than $3billion in outside capital each year.

(C) Gambia does not have sufficient heavy industry to fuel an increase in its GDP of more than 6% per year.

(D) A provision of the charter of the International Third World Banking Fund prohibits the Fund from increasing loans to a country by more than 50% in single year.

(E) A neighboring country experienced an increase of 5% in its Gross Domestic Product two year ago but an increase of only 3% in the most recent year.

38. Efficiency experts will attempt to improve the productivity of an office by analyzing production procedures into discrete work tasks. They then study the organization of those tasks and advise managers on techniques to speed production, such as rescheduling of employee breaks or relocating various equipment such as the copying machines. I have found a way to accomplish increases in efficiency with much less to do. Office workers grow increasingly productive as the temperature drops, so long as it does not fall below 68^0F.

The passage leads most naturally to which of the following conclusions?

(A) Some efficiency gains will be short-term only

(B) To maintain peak efficiency, an office manager must occasionally restructure office tasks.

(C) Employees are most efficient when the temperature is at 68^0F.

(D) The temperature efficiency formula is applicable to all kinds of work.

(E) Office workers will be equally efficient at 67^0F and 69^0F.

QUESTIONS 39, 40, AND 41

SPEAKER 1: Those who oppose abortion upon demand make the foundation of their arguments that sanctity of human life, but this seeming bedrock assumption is actually as weak as shifting sand. And it is not necessary to invoke the red herring that many abortion opponents would allow that human life must sometimes be sacrificed for a great good, as in the fighting of a just war. There are counter-examples to the principle of sanctity of life which are even more embarrassing to abortion opponents. It would be possible to reduce the annual number of traffic fatalities virtually zero federal legislation mandating a nationwide fifteen-mile-per-hour speed limit on all roads. You see, implicitly we have always been willing to trade off quantity of human life for quality.

SPEAKER 2: The analogy my opponent draws between abortion and traffic fatalities is weak. No one would propose such a speed limit. Imagine people trying to get to and from work under such a law, or imagine them trying to visit a friend or relatives outside their own neighborhoods, or taking in a sports event or a movie. Obviously such a law would be a disaster.

39. Which of the following best characterizes Speaker 2's response to Speaker 1?

(A) His analysis of the traffic fatalities case actually supports the argument of Speaker 1

(B) His analysis of the traffic fatalities case is an effective rebuttal of Speaker 1's argument.

(C) His response provides a strong affirmative statement of his own position.

(D) His response is totally irrelevant to the issue raised by Speaker 1.

(E) His counter-argument attacks the character of Speaker 1instead of the merits of Speaker 1's argument.

40. Which of the following represents the most logical continuation of the reasoning contained in Speaker 1's argument?

(A) Therefore, we should not have any laws on the books to protect human life

(B) We can only conclude that Speaker 2 is also in favor of strengthening enforcement of existing traffic regulations as a means to reducing the number of traffic fatalities each year.

(C) So the strongest attack on Speaker 2's position is that he contradicts himself when he agree that we should fight a just war even at the risk of considerable

loss of human life.

(D) Even the laws against contraception are good examples of this tendency.

(E) The abortion question just makes explicit that which for so long has remained hidden from view.

41. Which of the following assumptions are made in the argument of Speaker 1?

(A) The protection of human life is not a justifiable goal of society.

(B) A human fetus should not be considered a "life" for purposes of government protections

(C) Speed limits and other minor restrictions are an impermissible intrusion by government on human freedom

(D) An appropriate societal decision is made in the balancing of individual lives and the quality of life.

(E) Government may legitimately protect the interests of individuals but has no authority to act on behalf of families or groups.

Some Alphas are not Gammas.
All Betas are Gammas

42. Which of the following conclusions can be deduced from the two statements above?

(A) Some Alphas are not betas

(B) No Gammas are Alphas

(C) All Gammas are Betas

(D) All Alphas are Gammas

(E) Some Alphas are Gammas

43. I saw Barbara at the race track, and she told me that on the same horse race she made two win bets. She said she bet $10 on Boofer Bear to win at even money, and $5 on Copper Cane to win at odds of 10 to 1. After the race, she went back to the parimutuel window. So one or the other of those two horses must have won the race.
Which of the following is NOT an unstated premise of the reasoning above?

(A) The only bets Barbara made on the race were her win bets on Boofer Bear and Copper Cane.

(B) In the race in question, Boofer Bear and Copper Cane did not finish in a dead heat

(C) Barbara did not return to the parimutuel window after the race for somereason other than cashing a winning ticket

(D) Barbara's representation of the bets that she had placed was accurate.

(E) Barbara believed that it was more likely that Boofer Bear would win than Copper Cane.

44. Juana is dining at a Chinese restaurant. She will order either combination platter #2 or combination platter #5, but not both. If she orders combination platter #2, she will eat fried rice. If she orders combination platter #5, she will eat an egg roll. Given the statements above, Which of the following must be true?

(A) Juana will eat either fried rice or egg roll but not both

(B) If Juana eats an egg roll, then she ordered combination platter #5

(C) If Juana does not eat an egg roll, then she ordered combination platter #2

(D) If Juana eats fried rice, then she ordered combination platter #2

(E) Anyone who orders combination platter #2 eats fried rice.

45. The harmful effects of marijuana and other drugs have been considerably over-stated.
Although parents and teachers have expressed much concern over the dangers that widespread usage of marijuana and other drugs pose for high school and junior high school students, a national survey of 5,000 students of ages 13 to 17 showed that fewer than 15% of those students thought such drug use was likely to be harmful
Which of the following is the strongest criticism of the author's reasoning?

(A) The opinions of students in the ages group surveyed are likely to vary with age.

(B) Alcohol use among students of ages 13 to 17 is on the rise, and is now considered by many to present greater dangers than marijuana usage.

(C) Marijuana and other drugs may be harmful to users even though the users are not themselves aware of the danger.

(D) A distinction must be drawn between victimless crimes and crimes in which an innocent person is like to be involved

(E) The fact that a student does not think a drug is harmful does not necessarily mean he will use it.

46. AL: If an alien species ever visited Earth, it would surely be because they were looking for other intelligent species with whom they could communicate. Since we have not been contacted by aliens, we may conclude that none have ever visited this planet.

AMY: Or; perhaps, they did not think human beings intelligent.

How is Amy's response related to Al's argument?

(A) She misses Al's point entirely

(B) She attacks Al personally rather than his reasoning.

(C) She point out that Al made an unwarranted assumption.

(D) She ignores the detailed internal development of Al's logic

(E) She introduces a false analogy

47. I maintain that the best way to solve our company's present financial crisis is to bring out a new line of goods. I challenge anyone who disagrees with this proposed course of action to show that it will not work.
A flaw in the preceding argument is that it.

(A) employs group classifications without regard to individuals

(B) introduces an analogy which is weak

(C) attempt to shift the burden of proof to those who would object to the plan

(D) fails to provide statistical evidence to show that the plan will actually succeed

(E) relies upon a discredited economic theory

48. If quarks are the smallest subatomic particles in the universe, then gluons are needed to hold quarks together. Since gluons are needed to hold quarks together, it follows that quarks are the smallest subatomic particles in the universe
The logic of the above argument is most nearly paralleled by which of the following?

(A) If this library has a good French literature collection, it will contain a copy of Les Conquerants by Malraux. The collection does contain a copy of Les Conquerants; therefore, the library has a good French literature collection.

(B) If there is an man in the moon, the moon must be made of green cheese for him to eat. There is an man-in-the-moon, so the moon is made of green cheese.

(C) Either helium or hydrogen is the lightest element of the periodic table. Helium is not the lightest element of the periodic table, so hydrogen must be the lightest element of the periodic table

(D) If Susan is taller than Bob, and if Bob is taller than Elaine, then if Susan is taller than Bob, Susan is also taller than Elaine

(E) Whenever it rains, the streets get wet. The streets are not wet. Therefore, it has not rained.

49. In the earliest stages of the common law, a party could have a case heard by a judge only upon the payment of a fee to the court, and then only if the case fit within one of the forms for which there existed a writ. At first the number of such formalized cases of action was very small, but judges invented new forms which brought more cases and greater revenues.
Which of the following conclusions is most strongly suggested by the paragraph above?

(A) Early judges often decided cases in an arbitrary and haphazard manner.

(B) In most early cases, the plaintiff rather than the defendant prevailed.

(C) The judiciary at first had greater power than either the legislature or the executive.

(D) One of the motivating forces for the early expansion in judicial power was economic considerations.

(E) the first common law decisions were inconsistent with one another and did not form a coherent body of law.

50. If Martin introduces an amendment to Evan's bill, then Johnson and Lloyd will both vote the same way. If Evans speaks against Lloyd's position, Johnson will defend anyone voting with him. Martin will introduces an amendment to Evans's bill only if Evans speaks against Johnson's position.
If the above statements are true, each of the following can be true EXCEPT

(A) if Evans speaks against Johnson's position, Lloyd will not vote with Johnson

(B) if Martin introduces an amendment to Evans's bill, then Evans has spoken against Johnson's position

(C) if Evans speak against Johnson position, Martin will not introduces an amendment to Evans's bill

(D) if Matin introduces an amendment to Evans's bill then either Johnson will not vote with Lloyd or Evans did not speak against Johnson's position

(E) if either Evans did not speak against Lloyd's position or Matin did not introduce an amendment to Evans's bill, then either Johnson did not defend Lloyd or Matin spoke against Johnson's position.

ANSWER KEY

1.	E	11.	D	21.	C	31.	E	41.	D
2.	B	12.	B	22.	A	32.	D	42.	A
3.	C	13.	B	23.	B	33.	B	43.	E
4.	E	14.	A	24.	C	34.	E	44.	C
5.	B	15.	E	25.	D	35.	B	45.	C
6.	D	16.	E	26.	D	36.	E	46.	C
7.	B	17.	E	27.	E	37.	E	47.	C
8.	E	18	C	28.	E	38.	C	48.	A
9.	D	19.	E	29.	D	39.	A	49.	D
10	E	20.	D	30.	A	40.	E	50.	D

EXPLANATIONS

1. The correct answer is (E). This item tests logical deduction. Statement 1 establishes that all batters bunt whenever two conditions are met. Some runners leads off and all infielders play in. Statement II establishes that one of the two conditions is met (some runners are leading off), but denies that all batters are bunting. This can only be because the other condition is not met; it is false that "All infielders are playing in". Recalling our discussion of direct inferences in the instructional overview, we know that this means "Some infielders are not playing in" or answer (E). We cannot conclude (C), that none of the infielders are playing in, only that some are not. Nor can we deduce (D), that all are playing in-for that is logically impossible. Then, recalling our discussion of the meaning of some in the Instructional Overview, we eliminate both (A) and (B). Some means "at least one" with out regard to the remaining population. That some runners are leading off does not imply that some are not leading off (B). And that some batters are not bunting does not imply that some are bunting.

2. The correct answer is (B). The author's attitude toward the bankruptcy law is expressed by his choice of the terms "folly", protectionism" "conned". The author apparently believes that the debtor who has incurred these debts ought to bear the responsibility for them and that the government should not help the debtor get off the hook. (B) properly expresses this attitude. You have created for yourself a situation by your own actions: now you must accept it. The author may share the view (A) as well, but (A) is not a judgement the author would make about the bankrupt, that is, a person who does not have a penny to save. (C) is completely unrelated to the question at hand, the bankrupt has no power to wield. The author may believe (D), but the question stem asks for the author's attitude about the bankrupt debtor, not the government. (D) would be appropriate to the latter, but it has no bearing on the question at hand. Finally, (E) would be applicable if the government were giving money to pay a ransom to terrorists or some similar situation. The assistance it provides to the bankrupt debtor is not such a program. It does not pay tribute to the debtor.

3. The correct answer is (C). Ann's response would be appropriate only if Mary had said ,"All of the students at state College come from Midland High". That is why (C) is correct. (D) is wrong, because they are talking about the background of the students, not the reputations of the schools. (E) is wrong, for the question is from where the students at State College come. (B) is superficially relevant to the exchange, but it, too, is incorrect. Ann would not reply to this statement, had Mary made it, in the way she did reply. Rather, she would have said, "No, there are some Midland students at State College". Finally, Ann would have correctly said (A) only if Mary had said, "None of the students from North Hills attend State College. But Ann makes neither of these responses, so we know that (A) cannot have been what she thought she heard Mary say.

4. The correct answer is (E). If you wanted to determine how politically active people are, what kind of test would you devise? You might do a survey to test political awareness; you might do a survey to find out how many hours people devoted to political campaigning each week or how many hours they spend writing letters, etc.; Or you might get a rough estimate by studying the voting statistics. The paragraph takes contributions as a measure of political activity. (E) is correct for two reasons. One, the paragraph says nothing about individual activity. It says total contributions were up, not average of per person contributions. Second, (E) cities voting patterns which seems as good as or better an indicator of political activity than giving money. This second reason explains why (A) is wrong. (A) may weaken the argument, but a stronger attack would use voting patterns. (D) confuses individual and corporate contributions, so even if campaign giving

were a strong indicator of activity, (D) would still be irrelevant. (B) does not even explain why contributions *in toto* rose during the four years, nor does it tell us anything about the pattern of giving by individual persons. Finally, (C) seems the worst of all the answers, for it hardly constitutes an attack on the author's reasoning . It seems likely that even in the face of increased political activity, public leaders would continue to warn against the dangers of political apathy.

5. The correct answer is (B). The chief failing of the argument is that it draws a false analogy. Since prisons are required to feed and maintain as well as house prisoners (not to mention the necessity for security), the analogy to a hotel room is weak at best. (C) focuses on this specific shortcoming. Remember, in evaluating the strength of an argument from analogy it is important to look for dissimilarities which might make the analogy inappropriate. Thus, (A) and (E) are also good criticisms of the argument. They voice the general objection of which (C) is the specification. (D) is also a specific objection-the argument compares two numbers which are not at all similar. So the numerical comparison is a false one. (B) is not a way in which the argument can be criticized, for the author never cites any authority.

6. The correct answer is (D). The key phrase in this paragraph is "beef costs more per pound than fish". A careful reading would show that (A) is in direct contradiction to the explicit wording of the passage . (B) can not be inferred since the dietitian merely says, " I pay." Perhaps the dietitian intends to keep the price of a meal stable by cutting back in other areas. In any event, this is another example of not going beyond a mere factual analysis to generate policy recommendations unless the question stem specifically invites such an extension, e.g, which of the following courses of action would the author recommend? (C) makes an unwarranted inference. From the fact that beef is more costly one would not want to conclude that it is more profitable. (E) is wrong for the this reason also. (D) is correct because it focuses on the " Per measure of protein," which explains why a fish meal will cost the dietitian more than a beef meal, even though fish is less expensive per pound.

7. The correct answer is (B). One of the most common patterns to look for with this type of question is the "surprise result," that is , an unanticipated factor that defeats the expected outcome. (B) fits this pattern: you'll be so hungry from the workout that you'll eat more. (Remember that you are told to accept the soundness of each of the answer choices.) The other choices just don't have the same logical "zip." Anyway, (A) seems to strengthen the argument. It's okay to do what the ad suggest. And (C) doesn't focus on the logic of the ad-even though it probably helps to explain why the ad might be effective. (D) and (E) are wrong because they address issues that are not really on the table, so to speak; the ad is not addressing those who are already happy nor those who are overly thin.

8. The correct answer is (E). The reasoning in the argument is representative of the fallacy of false cause. Common sense tells you that you are not necessary safer driving at higher speeds. Moreover, the distance you are from your home does not necessarily make you more or less safe. And it will not do to engage in wild speculation, e.g., People suddenly become more attentive at speeds over 45 mile per hour. The exam is just not that subtle. Rather we should look for a fairly obvious alternative explanation, and we find it in (E). The real reason there are fewer fatalities at speeds over 50 mile per hour and at a distance greater than 25 miles from home is that less driving time is logged under such conditions. Most driving originates at home and proceeds at speeds sets for residential areas. (A), (B), and (C) all seem to make plausible statements, but they are irrelevant to the claim made in the stem paragraph. It is difficult to see how they could either weaken or strengthen the argument. (D) has the merit of addressing the statistics used to support the argument, but without further information (D) does not weaken the argument-it merely makes an observation.

To be sure, if we knew that states were notoriously bad at gathering statistics, (D) could weaken the argument. But that requires speculation, and we always prefer an obvious answer such as (E).

9. The correct answer is (D). The author states that a certain amount of rain in a given time usually results in mushrooms growing in his backyard. Both (A) and (B) are wrong for the same reason. From the fact that there has not been the requisite minimum rainfall required for mushrooms, we would not want to conclude that there has been no rain at all. (C) overstates the author's case and is for that reason wrong. The author specifically says it "usually" happens this way. Thus, the author would not want to say that the absence of mushrooms and fungus definitely means that the requisite amount of rain has not fallen-only that it seems likely or probable that there has not been enough rain. And (E) would not be supportable without some further premise about rain now. Notice that (D) is a safe conclusion: "probably" and "not more".

10. The correct answer is (E). The sample argument is a straightforward generalization. All observed S are P. X is an S. Therefore, X is P. Only (E) replicates this form. The reasoning in (A) is : "Some S are P. All M are S. (All swans are birds, which is a suppressed assumption.) Therefore, all M are P." That is like saying: Some children are not well behaved. All little girls are children. Therefore, all little girls are well behaved." (B), too, contains a suppressed premise. Its structure is : "All S are P. All S are M.(All ballets are theatrical productions, which is suppressed.) Therefore, all M are P". That is like saying "All little girls are children. All little girls are human. Therefore, all humans are little girls". (C) is not a generalization at all. It takes a generalization and attempts to explain it by uncovering a causal linkage. (D) is simply a non sequitur. It moves from the universality of the concept of justice to the conclusion that justice is a physical trait of humans.

11. The correct answer is (D). The author is attempting to argue that laws against suicide are legitimate. The author argues against a simplistic libertarian position which says suicide hurts only the victim. The goal of the law, he argues, is not just to protect the victim from himself. A society passes such a laws because it wants to underscore the importance of human life. Reading beyond the blank in the second paragraph makes clear the author's views on the value of human life. (A) flies in the face of the explicit language of the passage. The author does not defend the law as being a deterrent to suicide. (B) might be something the author believes, but it is not something developed in the passage. The author is not concerned here with explaining how the laws came to be on the book, but is concerned, only with defending them. If anything, (B) would be more appropriate in the context of an argument against such laws. (C) also is something the author may believe, but the defense of the suicide law is not that it protects liberties-only that it serves a function and does not interfere with constitution liberties any more than laws prohibit doing violence to others. (E) is wrong for the same reason that (B) is wrong. It seems to belong more in the context of an argument against suicide laws.

12. The correct answer is (B). With the comments in #11 in mind, it is clear that (B) must be correct. The author wants to make the point that suicide is not a victimless crime; it affects a great many people-even, it is claimed, some who were never personally acquainted with the suicide. Again, reading the whole passage is helpful. (A) as a joke - obviously suicide does not to more serious crimes. That is to like saying the death penalty is designed to rehabilitate the criminal. (C) simply focuses on the superficial content of the sentence. One, it's talking about church and state, so (C). Which mention sin, is not correct. (D) is wrong because the authors is not concerned to defend the laws as deterrents to suicide, as we discussed in #11. Finally, (E) is irrelevant to the point that the entire community is affected by the death of any one of its members.

13. The correct answer is (B). This third question, too, can be answered once the comments of #11 are understood. The key words here is "oversimplification". The libertarian oversimplifies matters by imagining that the only function of the law is to protect a person from self-harm. This is oversimplified because it overlooks the fact that such laws also serve the functions of (1) underscoring the value of life, and (2) protecting the community as a whole from the loss of any of its members. (A) is in correct because the libertarian does not make this error but the related one of evaluating the function of the law only from the perspective of suicide. (C) is wrong, for the author apparently shares with the libertarian the assumption that a law must not illegitimately interfere with individual liberty. The whole defense of the laws against suicide is that they have a legitimate function. (D) is wrong for the same reasons that (C) of #12 is wrong. Finally, (E) is very much like (A).

14. The correct answer is (A). (C) and (D) are wrong because they extrapolate without sufficient information. (E) contradicts the last given statement and so cannot be a conclusion of it. That would be like trying to infer "all men mortal" from the premise that men are mortal". (B) commits an error by moving from "all S are P" to "all P are S". Just because all racing engines have SFI does not mean that all SFIs are in racing engines. Some may be found in tractors and heavy-duty machinery.

15. The correct answer is (E). This is a very tricky question. The key here is to keep in mind that you are to pick the BEST answer, and sometimes you will not be very satisfied with any of them. Here (E) is correct by default of the others. (A) has some merit. After all the economist really isn't very careful in stating the claim. The author says " here we go again" when there is no evidence that we have ever been there before. But there is no particular term the author uses that we could call ambiguous. (B) is wrong because although the economist assumes some people take that position (otherwise, against whom would the argument be directed), the statement does not imply that the economist alone thinks differently. (C) is like (A), a possible answer, but this interpretation requires additional information. You would have to have said to yourself. 'Oh, I see that the economist is against it. He is probably saying this in an exasperated tone and in the context of a diatribe." If there were such additional information, you would be right, and (C) would be a good answer. But there isn't. (E) does not require this additional speculation and so is truer to the given information. (D) would also require speculation. (E) is not perfect, just BEST by comparison.

16. The correct answer is (E). The argument assumes that a right cannot exist unless it is recognized by the positive law of a society. Against this assumption, it can be argued that a right may exist even though there is no mechanisms for protecting or enforcing it. That this is at least plausible has been illustrated by our own history, e.g., Minority groups have often been denied rights. These rights, however, existed all the while-they were just not protected by the government. (A) is incorrect, for the proponent of the theory of natural rights cannot deny that some human beings do not have them. That would contradict the very definition of natural right on which the claim is based. (B) is incorrect because it is not responsive to the argument. Even if (B) is true, the attacker of natural rights still has the argument that there are no universally recognized rights, so there are no universal (natural) rights at all. (C), like (A,) is inconsistent with the very idea of a "natural" right. (D) is incorrect because it does not respond to the attacker's universally. Consistency or universality within one society does not amount to consistency or universality across all societies.

17. The correct answer is (E). The author is arguing that political parties in America are weak because there is no party unity. Because of this lack of unity, the party is unable to pass legislation. (E) would strengthen this contention. (E) provides an example of a government dominated by a single party (control of the presidency and

both houses), yet the party is unable to pass its own legislation. (A) provides little, if any, support for the argument. If there are only 18 defectors out of a total of 67 party members, that does not show tremendous fragmentation. (B) is even weaker by the same analysis: 70 defectors out of a total of 305 party members (C) is weak because it focuses on the minority party. (D) strengthens the argument less clearly than choice (E) because there are many possible explanations for the failure; for example, a different party controlled the legislature.

18. The correct answer is (C). Here we are looking for the argument that will undermine the position taken by the paragraph. Remember that the ultimate conclusion of the paragraph is that this disunity is a weakness and that this prevents legislation from being passed. One very good way of attacking this argument is to attack the value judgement upon which the conclusion is based. Is it good to pass the legislation? The author assumes that it would be better to pass the legislation. We could argue, as in (C), that members of the Congress should not pass legislation simply because it is proposed by the party leadership. Rather, the members should represent the views of their constituents. Then, if the legislation fails, it must be the people who did not want it. In that case, it is better not to pass the legislation. (A) does not undermine the argument. That members receive funding proves nothing about unity after elections. As for (B), this seems to strengthen rather than weaken the argument. The author's thesis argues that there is greater unity in the Senate than in the House. (D) would undermine the argument only if we had some additional information to make it relevant. Finally, (E) does not weaken the argument greatly. That some legislation is passed is not a denial of the argument that more should be passed.

19. The correct answer is (E). This advertisement is simply rife with ambiguity. The wording obviously seeks to create the impression that FCBI found jobs for its many graduates and generally does a lot of good for them. But first we should ask how many graduates FCBI had-one, two, three, a dozen, or a hundred. If it had only 12 or so, finding them jobs might have been easy; but if many people enroll at FBI, they may not have the same success. Further, we might want to know how many people graduate compared with how many enrolled. Do people finish the program, or does FCBI just take their money and then force out of the program? So (B) is certainly something we need to know in order to assess that validity of the claim. Now, how many of those who graduated came in looking for help in finding a job? Maybe most people had jobs waiting for them (only a few needed help), in which case the job placement assistance of FCBI is not so impressive. Or, perhaps the graduates were so disgusted they did not even seek assistance. So (A) is relevant. (C) is also important. Perhaps FCBI found them jobs sweeping streets-not in business. The ad does not say what jobs FCBI helped its people find. Finally, maybe the jobs-but maybe they did not their own. So (D) also is a question worth asking . (E), however, is the least problematic. Even if it turns out that the ad was done by a paid, professional actor, so what ? That's what you'd expect for an ad.

20. The correct answer is (D). The argument commits several errors. One obvious point is that the first premise is very much an oversimplification. Complicated questions about punishment and child rearing are hardly ever easily reduced to "either-or" propositions. Thus, (C) is a good objection. Beyond that, the terms "severely punish" and "bad" are highly ambiguous. It would be legitimate to ask the speaker just what he considered to be bad behavior, (B), and severe punishment, (A). Also , since the speaker has alleged the child has been "bad" and since the term is ambiguous, we can also demand clarification on that score, (E). The one objection it makes no sense to raise is (D). The premises have the very simple logical structure. If a child is bad and not

punished, then the child becomes a criminal. Child X is bad. There is a absolutely no inconsistency between those two statements.

21. The correct answer is (C). Notice that the question gives you some extra guidance here: There is a seeming inconsistency in the reports. On the one hand, much research suggests it is not. Of course, it is possible that the earlier research was just poorly done, but that wouldn't make a very interesting test answer, e.g,. The earlier researchers just added incorrectly.(C) is more representative of the kind of answer you would find on the test; the earlier research was based on data that was biased and no one suspected that fact until now. As for the remaining choices, they hint at the various weakness in the data on dyslexia, but they do not address the seeming contradiction that is the focus of the question stem.

22. The correct answer is (A). Examine each statement. (A) is a hidden assumption of the argument. Under the proposed system, according to th e speaker, schools will have to make the customers happy and concludes that this will result in improved education. Thus, a hidden assumption of the argument is the equation between "happy customers" and improved education". (B) is not an assumption of the argument. Indeed, the speaker implies that in an effort to attracts students, schools will try to differentiate themselves from each other. And as for (C), the speaker does not assume that there is any causal connection between "aid" and "study". The speaker expects to see a positive result because schools are doing a better job. That may prompt students to study harder, but the motivating factor then is not "direct financial aid". (D) is apparently a misreading of the paragraph. The speaker says that schools will compete in terms of "education services," which may be board enough to include other activities but, in any event, certainly does not preclude offering other activities in the mix. And as for (E), the speaker does not say that there should be no privately funded schools at all - only that the public schools should be funded on a different model.

23 The correct answer is (B). The speaker assumes that students and parents will be educated consumers. (Pardon the play on words). If it turns out that students and parents select a school because it is nearby, then schools don't have any incentive to offer creative educational programs in order to attract students; and a fundamental premise of the plan is proved incorrect. As for (A), this idea actually strengthens the argument for the plan: Schools will make sure that students and parents are educated consumers. (C) too is consistent with the speaker's analysis: Schools will create new programs to attract customers, as for (D), though this idea of cost is not discussed by the speaker, reducing costs would hardly be a disadvantage of a program. Finally, (E) seems to cut in favour of the program, for then ensure that everyone gets a fair opportunity to get an education.

24. The correct answer is (C). The speaker contrasts the Olympic sport of hockey which gets media coverage because it generates revenues, with speed skating, which does not get media coverage. The implication here is that speed skating does not generate revenue. As for (A), this choice confuses the distinction drawn by the speaker. The speaker is contrasting two sports, not an individual performance in two sports. (B) misconstrues the logical function of the example of speed skating in the argument. Speed skating is offered as an example of a sport which receives little attention even though it produces exciting amateur performances. (In fact, the speaker implies that hockey is more popular than speed skating, at least if one uses media coverage as a standard). (D) is an interesting response because it seems at least consistent with the sentiment expressed in the paragraph: Olympic games are really not entirely amateur sports. But (D) overstates the case: All Olympians are professionals. (What about Heiden whom the author mentions favourably finally, (E) goes even further beyond the text. The speaker may or may not hold this opinion.

25. The correct answer is (D). Let us use our technique of substituting capital letters for categories. The sample argument can be rendered:

Some J and B. (Some Judges are Bar members).

No B are F. (No Bar members are Felons.) Therefore, some J are not. F (Some Judges are not Felons).

This is a perfectly valid (logical) argument. (D) shares its form and validity:
Some N are I. (Some Non-students are Interested.)

No N are M. (No Non-students are Meeting-attenders).

Therefore, some J are not M. (Some Interested Non-students are not Meeting-attenders).

(E) has the invalid argument form:

G is L.

G is A.

Therefore, A is L.

(B) and (C) are both set up using more than three categories: therefore, they cannot possibly have the structure of the sample argument that uses only three categories:

(B) people who want to avoid jury duty, people who do not register to vote , persons under 18

(C) business, entities filing tax returns, business making enough money to pay taxes, business making a profit.

Finally, (A) does not parallel the sample argument since it contains the qualification "likely".

26. The correct answer is (D). The author's argument is admittedly not a very persuasive one, but the question stem does not ask us to comment on its relative strength. Rather, we are asked to identify the form of argumentation. Here the author suggests an alternative explanation, albeit a somewhat outlandish one. Thus, (D) is correct, (E) is incorrect because the claim about fresh air and the country is introduced as a causal explanation, not an analogy to the city. (C) is wrong for the author accepts the differential described by the report and just tries to explain the existence of the differential another way. By the same token we can reject both (A) and (B) since the author takes the report's conclusion as a starting point. Although the argument attacks the explanation provided by the report published by the Department of Education, it does not attack the credibility of the department itself. Further, though it disagrees with the conclusion drawn by the report, it does not attack the way in which the study itself was conducted. Rather, it disagrees with the interpretation of the data gathered.

27. The correct answer is (E). The question stem asks us to find the one item which will not strengthen the author's argument. That is (E). Remember, the author's argument is an attempt (to be sure, a weak one) to develop an alternative causal explanation. (A) would provide some evidence that the author's claim - which at first glance seems a bit far-fetched - actually has some empirical foundation. While (B) does not add any strength to the author's own explanation nation of the phenomenon being studied, it does strengthen the author's overall position by undermining the explanation given in the report. (C) strengthens the author's position for the same reason that (B) does: It weakens the position that is attacked. (D) strengthen the argument in the same way that (A) does, by providing some empirical support for the otherwise seemingly far-fetched explanation.

28. The correct answer is (E). Perhaps the most obvious weakness in the argument is that it oversimplifies matters. It is like the domino theory arguments adduced to support the war in Vietnam: either we fight Communism now or it will take us over. The author argues, in effect: Either we put a stop to this now, or there will be no stopping it. Like the proponents of the domino theory, the author ignores the many intermediate positions one might take. (C) is one way of describing this shortcoming: The dilemma posed by the author is a false one because it overlooks positions between the two extremes. (B) is also a weakness of the argument: "Cold-

blooded murder" is obviously a phrase calculated to excite negative feelings. Finally, the whole argument is also internally inconsistent. The conclusion is that we should allow nature to take its course. How? By prolonging life with artificial means. But the argument doesn't cite an authority, so (E) is the correct answer.

29. The correct answer is (D). We can summarize the information, using capital letters to represent each statement:

If P, then Q

If Q, then R or S

If R or S and if Q then A

If R or S and if not -Q, then not-A.

Where P represents "Paul comes to the party, "Q represents "Quentin leaves the party," R represents "Robert asks Alice to dance,: S represents "Steve asks Alice to dance," (and conversely R represents "Alice is asked by Robert to dance" and S represents "Alice is asked by Steve to dance"), and A represents Alice accepts. If we have not -Q, then we can deduce not P from the first statement; thus, we have (D), (A), (B), and (C) are incorrect since there is no necessity that Robert or Steve ask Alice to dance. (E) is incorrect since this statement is different from our other statements and must be assigned a different letter, perhaps X. Notice that "Alice will accept..." Tells us nothing about whether Alice leaves the party.

30. The correct answer is (A). The question stem has the form:

All S are AP. (All students are Applicants).

Some AP are AC (Some Applicants are accepted).

Some more S are AC. (Some more students are accepted).

Notice that (A) preserves very nicely the parallel in the conclusion because it uses the word "more", . Thus, the error made in the stem argument (that some more students will be accepted) is preserved in (A): more apples will be loaded. (B) has a valid argument form (All S are J; X is an S; therefore, X is a J), so it is not parallel to the sample argument. (C) is not similar for that least two reasons. First, its conclusion is a recommendation ("should"), not a factual claim. Second, (C) uses one premise, not two premises as the sample argument does. (D) would have been parallel to the sample argument only if the sample had the conclusion "some more applications must be acted upon". Finally, choice (DE) choice (e) contains an argument that is fallacious, but the fallacy is not similar to that of the question stem.

31. The correct answer is (E). The advertisement employs the term "more" in an ambiguous manner. In the context, one might expect the phrase "more flavor" to mean "more highly concentrated flavor," that is, "more flavor per unit weight." What the ad actually says, however, is that the sticks of Evergreen are larger, so if they are larger, there must be more total flavor. As for (A), it is possible to beat the ad at its own game. If flavor is just a matter of chewing enough sticks, then Spring Mint is an good a deal because, flavor unit for flavor unit, it is no more expensive than Evergreen. Second, (B) would also undermine the ad by focusing on the ambiguity we have just discussed. Finally, (C) also uncovers another potential ambiguity. If the ad is comparing volume rather than weight, Spring Mint may be a better value. After all, who wants to buy a lot of air? As for (A), it is possible to beat the ad at its own game: Want more flavor? Chew more sticks? As for (B), more highly concentrated favor means more flavor per stick, so size is not important. As for (C), a bigger stick doesn't necessarily mean more flavor. And (D), of course, cuts to the heart of the claim: money or value. Choice (E), however, if anything, would add to the appeal of the ad: do what most people do.

32. The correct answer is (D). Again, we remind ourselves that we are looking for the most reliable statement. Even the most reliable, however, will not necessarily be perfectly reliable. Here (D) is fairly trustworthy. We note that the speaker is an expert and so is qualified to speak about wines. In (A), the speaker is making a judgement about something outside the expertise of a film

critic. Also, in (D) there is no hint of self-interest - if anything, the speaker is admitting against a possible self-interest that American chablis is a better buy than French chablis. By comparison, (B) and (C), which smack of a self-serving bias, are not so trustworthy. Finally, (E) - sounds like a statement made for dramatic effect and so is not to be taken at face value.

33. The correct answer is (B). The weakness in the argument is the fallacy of ambiguity. It uses the term "future"in two different ways. In the first instance, it uses the word "future" to mean that which is fixed and definite, that which must occur. But then comes the shift. The author subtly changes usage so that "future" denotes events which might, though not necessarily will, come to pass. As for (A), the author gives a good examples of how one might very well be able to change the future. As for (C), the author is concerned to refute the idea of foreseeing future events, so it is not surprising that there is no attempt to explain the mechanism by which such foresight is achieved. (D) and (E) are incorrect because the fallacy is that of ambiguity, not of internal inconsistency (self-contradiction) nor circular reasoning (begging the question).

34. The correct answer is (E). The argument given in the question stem is circular, that is, it begs the question. It tries to prove that the decision is unfair by claiming that is singles out a group, which is the same thing as discriminating, and then concludes that since all discrimination is unfair, so too, is the court's decision unfair. Of course, the real issue is whether singling out this particular group is unfair. After all, we do make distinctions, e.g., Adults are treated differently than children, business differently than persons, soldiers differently than executives. The question of fairness cannot be solved by simply noting that the decision singles out some persons. (E) also is circular: It tries to prove this as a beautiful painting because of a paintings of this sort are beautiful. (A) is perhaps the second best answer, but notice that it is purely hypothetical in its form: if this were true, then that would be true. As a consequence, it is not as similar to the question stem as (E), which is phrased in categorical assertions rather than hypothetical statements. (B) moves from the premise that students are not good judges of their needs to a conclusion about the responsibility for planning course work. The conclusion and the premise are not the same so the argument is not circular. (C) is not, technically speaking, even an argument. Remember from our instructional material at the beginning of the book, an argument has premises and a conclusion. These are separate statements. (C) is one long statement, not two short ones. It reads: "A because B"; not "A; therefore B" for example, the statement "I am late because the car broke down" is not an inference but a causal statement. In (D), since the premise (everything after the semicolon) is not the same as the conclusion (the statement before the semicolon), the argument is not a circular argument and so does not parallel the stem argument.

35. the correct answer is (B). The author's claim depends on a very important way on the assumption that the assistance he advocates will be successful. After all, any proposed course of action that just won't work clearly ought to be rejected (B) is just this kind of argument: Whatever else you say, your proposed plan will not work; therefore, we must reject it. (A) opens an entirely new line of argument. The author has said only that there is a certain connection between guidance and creativity; he never claims that everyone can or should be a professional artist. Thus, (A) is wrong, as is (E) for the same reason (C) is wrong for a similar reason. The author never suggests that all students should be professional artists; and, in fact, he may want to encourage students to be creative no matter which practical careers they may choose. (E) is probably the second best answer; it does, to a certain extent, try to attack the workability of the proposal. Unfortunately, it does not address the general connection the author says exists between, (E) does not say the proposal will not work at all; it merely says it may work too well. Further, (E) is wrong because it does not attribute the "burnout" to the training of the sort proposed by the author.

36. The correct answer is (E). What we are looking for here is an intervening causal link that caused the plan to be unsuccessful. The projected train of events was: (1) Adopt express lanes, (2) fewer cars, and (3) faster traffic flow. Between the first and the third steps, however, something went wrong. (E) alone supplies that unforeseen side effect. Since the cars backed up on too few lanes, total flow of traffic was actually slowed, not speeded up. (A) is irrelevant since it does not explain what went wrong after te plan was adopted. (B) does not even attempt to address the sequence of events which we have just outlined. Although (C) is probably true and was something the planners likely considered in their projections, it does not explain the plan's failure. Finally, (D) might have been relevant in deciding whether or not to adopt the plan, but given that the plan was adopted, (D) cannot explain why it then failed.

37. Th correct answer is (E). We have all seen arguments of this sort in our daily lives, and perhaps if we have not been very careful, we have even made the same mistakes made by the leaders of Gambia. For example, last semester, which was fall, I made a lot of money selling peanuts at football games. Therefore, this spring semester I will make even more money. (A), (B), (C), and (D) point out weaknesses in the projections made by Gambia's leaders. (A): of course, if the tremendous increase in GDP is due to some unique event (my personal income increased last semester when I inherited N2,000 from my aunt), it would be foolish to project a similar increase for a time period during which that event cannot repeat itself. (B): This is a bit obvious, but the projection is based on the assumption that Gambia will receive additional aid, and will be able to put that aid to use. If they are not in a position to use that aid (I cannot work twice as many hours in the spring), they cannot expect the aid to generate increases in GDP. (C) also is a weakness in the leader's projections. If there are physical limitations on the possible increases, then the leaders have made an error. Their projections are premised on the existence of physical resources that are greater than those they actually have. And (D) would also undermine the expectation of additional growth: Gambia won't get the whole loan. (E), however, without more, won't weaken the argument, because there is no reason to believe that the experience of a neighbor is applicable to Gambia.

38. The correct answer is (C). The conclusion of the paragraph is so obvious that it is almost difficult to find. The author says office workers work better the cooler the temperature-provided the temperature does not drop below 68^0. Therefore, we can conclude, the temperature at which workers will be most efficient will be precisely 60^0. Notice that the author does not say what happens once the temperature drops below 68^0 except that workers are no longer as efficient. For all we know, efficiency may drop off slowly or quickly compared with improvements in efficiency as the temperature drops to 68^0. So (E) goes beyond the information supplied in the passage. (D) also goes far beyond the scope of the author's claim. His formula is specifically applicable to office workers. We have no reason to believe the author would extend his formula to non-office workers. (B) is probably not a conclusion the author would endorse since he claims to have found a way of achieving improvements in efficiency in different and seemingly permanent way. Finally, (A) is not a conclusion the author seems likely to reach since nothing indicates that his formula yields only short-term gains which last as long as the temperature is kept constant. To be sure, the gains will not be repeatable, but then they will not be short-run either.

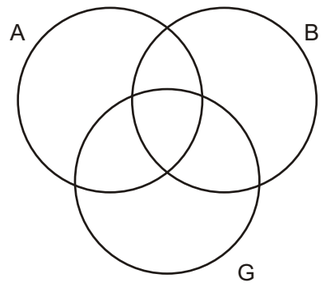
39. The correct answer is (A). Speaker 2 unwittingly plays right into the hands of Speaker 1. Speaker 1 tries to show that there are many decisions regarding human life in which we allow that an increase in the quality of life justifies an increases in the danger to human life. All that Speaker 2 does is to help prove this point. He says the quality of life would suffer if we lowered the speed limits to protect human life. Given this analysis, (B) must be incorrect, for Speaker 2's position is completely ineffective as a rebuttal. Moreover, (C) must be incorrect, for his response is not a strong statement of his

response is not a strong statement of his position. (D) is incorrect, for while his response is of no value to the position he seeks to defend, it cannot be said that it is irrelevant. In fact, as we have just shown, his position is very relevant to that of Speaker 1's because it supports that position. Finally, (E) is not an appropriate characterization of Speaker 2's position, for he tries, however ineptly, to attack the merits of Speaker 1's position, not the character of Speaker 1's .

40. The correct answer is (E). Speaker 1 uses the example of traffic fatalities to sow that society has always traded the quality of life for the quantity of life. Of course, he says, we do not always acknowledge that is what we are doing, but if we were honest we would have to admit that we were making a trade -off. Thus, (E) is the best conclusion of the passage. Speaker 1's statement amounts to the claim that abortion is just another case in which we trade off one life to make the lives of others better. The only difference is that the life being sacrificed is specifiable and highly visible in the case of abortion, whereas in the case of highway fatalities no one knows in advance on whom the ax will fall. (A) certainly goes far beyond what Speaker 1 is advocating. If anything, he probably recognizes that sometimes the trade-off will be drawn in favor of protecting lives, and thus we need some such laws. (B) must be wrong, first, because Speaker 2 claims this is not his position, and second, because Speaker 1 would prefer to sow that the logical consequence of Speaker 2's response is an argument in favor of abortion. (C) is not an appropriate continuation because Speaker 1 has already said this is a weak counter-example and that he has even stronger points to make. Finally, Speaker 1 might be willing to accept contraception, (D), as yet another example of the trade-off, but is conclusion can be much stronger than that: the conclusion of his speech ought to be that abortion is an acceptable practice not that contraception is an acceptable practice.

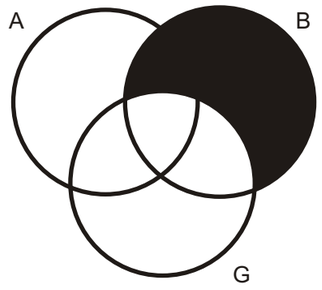
41. The correct answer is (D). This is a very difficult question. That (D) is an assumption Speaker 1 makes requires careful reading. Speaker 1's attitude about the just war tips us off. He implies that this is an appropriate function of government and, further, that there are ever clearer cases. Implicit in his statement is that a trade-off must be made and that it is appropriately a collective decision. (A) is not a assumption of the argument. Indeed, Speaker 1 seems to assume, as we have just maintained, that the trade-off is an appropriate goal of society. Speaker 1 does not assume (B); if anything, he almost states that he accepts that the fetus is a life but it may be traded off in exchange for an increase in the quality of the lives of others. (C) and (E) use language related to the examples used by Speaker 1 but don't address the logical structure of the argument.

42. The correct answer is (A). You might attack this item using a circle diagram. To show the possible relationship of three categories, use three overlapping circles:

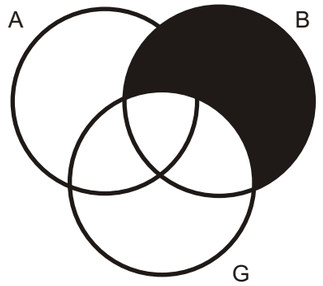


Now enter the information provided by the second statement:

The area that is not logically possible given the second statement is shaded. Now enter the information provided by the first statement:



The "x" shows that there is at least one individual which is an Alpha but not a Gamma.



The diagram shows that choice (A) must be true. There is at least one individual that is an Alpha but not a Beta. (B) however, is not necessarily true. The overlap between the Alpha-circle and the Gamma-circle, which represents the possibility that an individual might have both characteristics Alpha and Gamma, is left open. (C) is not necessarily true for a similar reason. There is a portion of the Gamma-circle not contained in the Beta-circle, and this part represents the logical possibility that some individuals could have characteristic Gamma but not characteristic Gamma but not characteristic Beta. (D) is shown by the diagram to be false; (E) is shown to be possibly, but not necessarily, true.

43. The correct answer is (E). This question asks you to identify hidden assumptions embedded in the speaker's argument. Examine each statement. (A) is an assumption of the argument. Barbara told the speaker about two bets, and the speaker assumes those were the only two she made. (She could have made additional wagers). (B) is also an assumption of the argument. The speaker concludes that one or the other horse must have won, but that conclusion depends on the assumption that they did not both win. (C) is also an assumption of the argument. The speaker implicitly assumes that the only reason Barbara would return to the parimutuel window is to cash a winning ticket, as opposed to placing another bet. And (D) is also a hidden assumption, similar to (A). (E), however, is not an assumption. Barbara could very well have believed that Copper Cane was more likely to win-indeed, she stood to win more money with that result even though her bet was smaller because of the longer odds.

44. The correct answer is (C). It is very important to distinguish what are called necessary conditions from what are called sufficient conditions. A necessary condition is one that must occur for a particular event to take place, e.g oxygen is a necessary condition fora fire. A sufficient condition is one that is by itself sufficient to ensure that a certain event occurs, for example, failing the final exam of a course may be sufficient to guarantee a failing mark for the course. This distinction is the key to this item. A statement of the sort "if X, then Y" (as used here) sets up a sufficient but not a necessary connection. For example, ordering combination #2 guarantees that Juana will eat fried rice, but that may not be the only condition on which she will eat fried rice. For all we know, combination #5 also includes fried rice. Thus, (A), (B), and (D) are wrong. As for (E), the statements that set up the problem talk specifically about Juana, not about people in general.

45. The correct answer is (C). If you want to determine whether or not drug use is harmful to high school students, you surely would not conduct a surgery of the students themselves. This is why (C) is correct. That a student does not think a drug is harmful does mean that it is not actually harmful. (E) misses the point of the argument. The author is not attempting to prove that drug use is not widespread but rather that it is not dangerous. (D) is part of an argument often used in debates over legalization of drugs by proponents of legalization. Here, however, it is out of place. The question is whether the drugs are armless, that is, whether they are, in fact, victimless. (D) belongs to some other part of the debate. (A) sounds like that start of an argument. One might suggest that students change their minds as they get older, and eventually many acknowledge the danger of such drugs. But (A) does not get that far; and, even if it did, (C) would be stronger for it gives us the final statement up to which that argument would only be leading. Finally, (B) is irrelevant. The question here is the harm of drugs, and that issue can be resolved independent of whether other things are harmful, such as alcohol or drag-racing.

46. The correct answer is (C). Amy points out that A1 assumes that any extraterrestrial visitors to Earth, seeking intelligent life, would regard human beings here on Earth as intelligent, and therefore contact us. Amy hints that we might not be intelligent enough to interest them in contacting us. This is why (C) is the best answer. (A) is wrong. Amy does not miss A1's point: She understands it very well and criticizes it. (B) is wrong since Amy is not suggesting that A1 is any less intelligent than any other human being, just that the aliens might regard us all as below the level of intelligence which they are seeking. (D) is more nearly correct than any other choice save (C). The difficulties with it are threefold: one, three really is not all that much internal development of Al's argument, so (D) does not seem on target; two, in a way she does examine what internal structure there is - she notes there is a suppressed assumption which is unsound; finally, even assuming that what (D) says is correct, it really does not describe the point of Amy's remark nearly so well as (C) does. Finally, (E) is incorrect because Amy does not offer an analogy of any sort.

47. The correct answer is (C). The problem with this argument is that is contains no argument at all. Nothing is more frustrating than trying to discuss an issue with someone who will not even make an attempt to prove his case, whose only constructive argument is: "Well, that is my position; if I am wrong, you prove I am wrong." This is an illegitimate attempt shift the burden of proof. The person who advances the argument naturally has the burden of giving some argument for it. (C) points out this problem. (A) is incorrect because the author uses no group classifications. (B) is incorrect because the author does not introduce any analogy. (D) is a weak version of (C). It is true that the author does not provide statistical evidence to prove the claim, but then again no kind of argument at all is offered to prove the claim. So if (D) is a legitimate objection to the paragraph (and it is), then (C) must be an even stronger objection. So any argument for answer (D)'s being the correct choice ultimately supports (C) even more strongly. The statement contained in (E) may or may not be correct, but the information in the passage is not sufficient to allow us to isolate the theory upon which the speaker is operating. Therefore, we cannot conclude that it is or is not discredited.

48. The correct answer is (A). Let us assign letters to represent the complete clauses of the sentence from which the argument is built. "If quarks...universe" will be represented by the letter P, the rest of the sentence by Q. The structure of the argument is therefore: "If P then Q. Q. Therefore, P". The argument is obviously not logically valid. If it were, it would work for any substitutions of clauses for the letters, but we can easily think up a case in which the argument will not work: "If this truck is a fire engine, it will be painted red. This truck is painted red; therefore, it is a fire engine." Obviously, many trucks that are not fire engines could also be painted red. The argument's invalidity is not the critical point. Your task was to find the answer choice that paralleled it-and since the argument first

presented was incorrect, you should have looked for the argument in the answer choice that makes the same mistake: (A). It has the form: "If P, then Q. Q. Therefore, P". (B) has the form: "If P, then Q. P. Therefore, Q", which is both different from our original form and valid to both. (C) has the form: "P or Q. Not P. Therefore, Q". (D) has the form: "If P, then Q. If Q, then R. Therefore, if P, then R." Finally, (E) has the form: "If P, then Q. Not Q. Therefore, not P".

49. The correct answer is (D). The author explains that the expansion of judicial power by increasing the number of causes of action had the effect of filling the judicial coffers. A natural conclusion to be drawn from this information is that the desire for economic gain fueled the expansion. (A) is not supported by the text since the judges may have made good decisions-event though they were paid to make them. (E) is incorrect for the same reason. (C) is not supported by the text since no mention is made of the other two bodies (even assuming they existed at the time the author is describing). (B) is also incorrect because there is nothing in the text to support such a conclusion.

50. The correct answer is (D). As we did in question 15, let us use letters to represent the form of the argument. The first sentence is our old friend: "If P, then Q". Now we must be careful not to use the same letter to stand for a different statement. No part of the second sentence is also a part of the first one, so we must use a new set of letters: "If R, then S". Do not be confused by the internal structure of the sentence. Though the second clause of the first sentence speaks about Johnson and Lloyd voting the same way, the second clause of the second sentence speaks about Johnson's defending someone. So the two statements are different ideas and require different letters. The first clause of the third sentence is the same idea as the first clause of the first sentence, so we use letter P again, but the second clause is different, T. The third sentence uses the phrase "only if". "P only if T", which can also be written: "If P, then T".
Our three sentences are translated as:

1. If P, then Q.
2. If R then S.
3. If P, then T.

Now we can find which of the answers cannot be true.

(A) "If R, then not Q". That is a possibility. While it cannot be deduced from our three assumptions, nothing in the three assumptions precludes it. So (A) could be true.

(B) "If P, then T". This is true, a restatement of the final assumption.

(C) "If T, then not P". This is possibly true. Sentence 3 tells us, "If P, then T", which is the same thing as "if not -T, then not-P"; but it does not dictate consequences when the antecedent clause (the if clause) is T.

(D) "If P, then either not -Q not -T." This must be false, since sentences 1 and 3 together tell us that from P must follow both Q and T.

(E) "If not -T or not -P, then either not -S or U". We have to add a new letter: U. In any event, this is possible for the reasons mentioned in (C).

SENTENCE COMPLETION TEST

50 QUESTION
15 MINUTES

DIRECTIONS Each of the question below contain one or more blank space, each blank indicating an omitted word. Each sentence is followed by five (5) words or sets of words. Read and determine the general sense of each sentence. Then choose the word, or set of words that, when inserted in the sentence, best fits the meaning of the sentence.

1. Despite the millions of naira spent on improvements, the electricity system in Nigeria remains _____and continues to _____ the citizens who depend on it.
   (A) primitive..inconvenience
   (B) bombastic..upset
   (C) suspicious..connect
   (D) outdated..elate
   (E) impartial..vet

2. Contrary to popular opinion, bats are not generally aggressive and rabid; most are shy and _____
   (A) turgid
   (B) disfigured
   (C) punctual
   (D) innocuous
   (E) depraved

3. Unlike the images in symbolist poetry which are often vague and _____, the images of surrealist poetry are startlingly _____and bold.
   (A) extraneous..furtive
   (B) trivial..inadvertent
   (C) obscure..concrete
   (D) spectacular..pallid
   (E) symmetrical..virulent

4. A good trial lawyer will argue only what is central to an issue, eliminating _____ information or anything else that might _____the client.
   (A) seminal..amuse
   (B) extraneous..jeopardize
   (C) erratic..enhance
   (D) prodigious..extol
   (E) reprehensible..initiate

5. Psychologists and science fiction writers argue that people persist in believing in extraterrestrial life, even though the Federal government _____all such beliefs, because people need to feel a personal sense of _____ in a godless universe.
   (A) decries..morbidity
   (B) endorses..despair
   (C) creates..guilt
   (D) discourages..spirituality
   (E) debunks..alienation

6. Pollen grains and spores that are 200 million years old are now being extracted from shale and are _____the theory that the breakup of the continents occurred in stages; in fact, it seems that the breakups occurred almost _____
   (A) refining..blatantly
   (B) reshaping..simultaneously
   (C) countermanding..imperceptibly
   (D) forging..vicariously
   (E) supporting..haphazardly

7. Because he was _____and the life of the party, his friends thought that he was happy; but his wife was _____and shy and was thought to be unhappy.
   (A) melancholy..sympathetic
   (B) philanthropic..conciliatory
   (C) vitriolic..sophomoric
   (D) garrulous..taciturn
   (E) inimical..gregarious

8. His offhand, rather_____ remarks _____ a character that was really rather serious and not at all superficial.
   (A) flippant..masked
   (B) pernicious..betrayed
   (C) bellicose..belied
   (E) shallow..enlivened

9. Although the faculty did not always agree with the chairperson of the department, they_____ her ideas, mostly in _____ her seniority and out of respect for her previous achievements
   (A) scoffed at..fear of
   (B) harbored..defense of
   (C) implemented.. Deference to
   (D) marveled.. At lieu of
   (E) ignored.. honor of

10. Psychologists agree that human beings have a strong need to _____ their time; having too much idle time can be as stressful as having none at all.
    (A) threaten
    (B) annihilate
    (C) structure
    (D) punctuate
    (E) remand

11. While scientists continue to make advance in the field of _____, some member of the clergy continue to oppose the research, arguing that it is _____for human beings to tamper with life.
    (A) psychology...imperative
    (B) astronomy..fallacious
    (C) genetics..immoral
    (D) geology..erroneous
    (E) botany..unethical

12. Although for centuries literature was considered something that would instruct as well entertain, the modern has little patience with _____ works and seeks only to be _____
    (A) epic..demoralized
    (B) didactic..distracted
    (C) bawdy..absorbed
    (D) superficial..enlightened
    (E) ambiguous..misled

13. Because of the _____ of acupuncture therapy in China, Western physicians are starting to learn the procedure.
    (A) veracity
    (B) manipulation
    (C) liquidity
    (D) effectiveness
    (E) inflation

14. The conclusion of the program was a modern symphony with chords so _____ That the piece produced sound similar to the_____one _____ hears as the individual orchestra members tune their instruments before a concert.
    (A) superfluous..moelody
    (B) pretentious..roar
    (C) melodious..applause
    (D) versatile..harmony
    (E) discordant..cacophony

15. Black comedy is the combination of that which is humorous with that which would seem _____ to humor: the _____
    (A) apathetic..ignoble
    (B) heretical..salacious
    (C) inferior..grandiose
    (D) extraneous..innocuous
    (E) antithetical..macabre

16. The press conference did not clarify many issues since the president responded with _____ and _____ rather than clarity and precision_____
    (A) sincerity..homor
    (B) incongruity..candor
    (C) fervor..lucidity
    (D) animation..formality
    (E) obfuscation..vaguness

17. It is difficult for a modern audience, accustomed to the _____ of film and television, to appreciate opera with its grand spectacle and _____ gestures.
    (A) irreverence..hapless
    (B) sophistication..monotonous
    (C) minutiae..extravagant
    (D) plurality..subtle
    (E) flamboyance..inane

18. The sonatas of Beethoven represent the _____of classicism, but they also contain the seed of its destruction, romanticism, which _____ the sonata form by allowing emotion rather than tradition to shape the music.
(A) denigration..perpetuates
(B) pinnacle..shatters
(C) plethora..heightens
(D) fruition..restores
(E) ignorance..encumbers

19. Although his work was often ____ and____, he was promoted anyway, simply because he had been with the company longer than anyone else.
(A) forceful..extraneous
(B) negligent..creative
(C) incomplete..imprecise
(D) predictable..careful
(E) expeditious..concise

20. Her acceptance speech was _____, eliciting thunderous applause at several points.
(A) tedious
(B) well received
(C) cowardly
(D) uninteresting
(E) poorly written

21. Shopping malls account for 60 percent of the retail business done in the United State because they are controlled environments, which _____ concerns about the weather.
(A) eliminate
(B) necessitate
(C) foster
(D) justify
(E) maintain

22. An oppressive _____, and not the festive mood one might have expected, characterized the mood of the gathering.
(A) senility
(B) capriciousness
(C) inanity
(D) solemnity
(E) hysteria

23. In order to _____ museums and legitimate investors and to facilitate the _____ of pilfered artifacts, art magazines often publish photographs of stolen archaeological treasures.
(A) perpetuate..return
(B) protect..recovery
(C) encourage..excavation
(D) undermine..discovery
(E) confuse..repossession

24. Despite some bad reviews, Horowitz' stature was not _____, and his fans and critics in Tokyo were unanimous in expressing their_____ his unique talent.
(A) distilled..kinship with
(B) embellished..ignorance of
(C) criticized..disdain for
(D) diminished..appreciation of
(E) convincing..concern for

25. Though the concert had been enjoyable, it was overly_____and the three encores seemed _____
(A) extensive..curtailed
(B) protracted..gratuitous
(C) inaudible..superfluous
(D) sublime..fortuitous
(E) contracted..lenghty

26. Peter _____by the repeated rejections of his novel,_____ to submit his manuscript to other publishers.
(A) encouraged..declined
(B) elated..planned
(C) undaunted..continued
(D) inspired.. Complied
(E) undeterred..refused

27. All _____ artists must struggle with the conflict between _____ their own talent and knowledge that very few are great enough to succeed.
(A) great..neglect of
(B) aspiring..faith in
(C) ambitious..indifference to
(D) prophetic..dissolution of
(E) serious..disregard of

28. The judge, after ruling that the article had unjustly _____the reputation of the architect, ordered the magazine to _____ its libelous statements in print.
(A) praised..communicate
(B) injured..retract
(C) sullied..publicized
(D) damage..disseminate
(E) extolled..produce

29. Although the language was _____ and considered to be inferior to standard English, Robert Burns wrote his love poetry in the language of the Scots
(A) interpreted
(B) belittled
(C) distinguished
(D) appreciated
(E) elevated

30. Given the Secretary of State's _____the President's foreign policies, he has no choice but to resign.
(A) reliance
(B) antipathy toward
(C) pretense of
(D) support for
(E) concurrence with

31. Philosophers tell us that one's lifetime is _____ when considered from the viewpoint of_____ making humans appear much less important than they think in the grand scheme of things.

32. The primitive emotions of love and hate, even though extreme opposites, are found in varying degrees even in the most and _____person, according to sociologists.

33. When surveying the rule of the elderly king, we could only conclude that as he neared his____ he became a(n) _____ruler, which was obvious by his inattention to some matters.
(A) pinnacle....blatant
(B) dotage.... effete
(C) prime.... voluble
(D) euphony..dissident
(E) prerogative..covert

34. Surveying the college course guide, we could conclude that _____ is a phase of the study of _____
(A) nihilism..gynecology
(B) hypertension etymology
(C) recidivism..criminology
(D) altruism..paleontology
(E) hallucination..chivalry

35. A refugee may be forced to _____ allegiance to his former country and _____all of his former friends in order to work in a new country.
(A) fabricate..garble
(B) fetch..extradite
(C) fluctuate..expurgate
(D) abjure..forsake
(E) lacerate..occlude

36. Some experts think that the origin of schizophrenia is_____; others believe it is ____
(A) contiguous..environmental
(B) congenital..environmental
(C) congenital..deleterious
(D) contagious..pathological
(E) exogenous..celestial

37. Even though we had heard that Professor Smith of the English Department taught an easy class, we knew that____and _____are usually studied by those who enjoy the language.
(A) liturgy..pantheism
(B) philology..etymology
(C) prosody..ubiquity
(D) tautology..simony
(E) raillery..verity

38. When I am _____, I am also _____, I explained to my friends who wondered at my long face.
(A) scintillating..verbose
(B) quiescent..succinct
(C) lugubrious..lachrymose
(D) reviled..providential
(E) providential..rubicund

39. One of the things we learned in health class in that when eating, it is important to _____ thoroughly in order for proper _____ to occur.
(A) rankle..temerity
(B) mitigate..digestion
(C) transmute..veneration
(D) query..progeny
(E) masticate..digestion

40. Compelled by my professor to attend a lecture by an aging former teacher, I found the lecture was full of_____, and, as I had suspected and dreamed, it became most___
(A) cliches..bromidic
(B) gabble..blatant
(C) foibles..bombastic
(D) histrionics..insidious
(E) metaphors..laconic

41. After introducing two of my friends, I learned that the introduction was a disaster because her_____ immediately led her to suspect his_____ in discussing his life experiences
(A) philology..valiant
(B) rancor..secular
(C) vigilance..petulance
(D) perspicacity..fraudulence
(E) vagary..indolent

42. My friends were absolutely amazed when attending a religious convocation where the_____outbursts of the congregation were ignored by the _____
(A) heretical..indigent
(B) heinous..indolent
(C) profane..ecclesiastic
(D) ebullient..commissary
(E) flagrant..exodus

43. After ruining her dress, I would have preferred her most biting _____ to the _____ looks she directed my way.
(A) euphemism..consummate
(B) anodynes..feckless
(C) diatribes..reproachful
(D) effigies..refulgent
(E) histrionics..penitent

44. During the fearful storm, the people in its path _____ God for divine_____
(A) importuned..intervention
(B) imputed..favor
(C) expiated..revelation
(D) deprecated..power
(E) immortalized..gifts

45. After studying psychology for a quarter, I can see that my friend is a _____ because he is always _____ favors from others.
(A) sycophant..currying
(B) benediction..eliciting
(C) brigand..flouting
(D) facade..brandishing
(E) tryst..avowing

46. Many of my peers have turned to religion, realizing that the_____ in the church was a sign of_____ rather than money-hungry leaders.
(A) tithe..redress
(B) windfall..sacrilege
(C) skeptic..predilection
(D) wraith..piety
(E) schism..sedition

47. After the burglarizing of my home, I overhead the detective remark to the police officer that apparently the thief had moved in a_____ , _____ manner.
(A) sensuous..tangible
(B) furtive...surreptitious
(C) phlegmatic..probing
(D) moribund..menial
(E) ostentation..patrician

48. During our commencement, the student body president delivered the_____ ,which had a_____ effect on the audience.
(A) martinet..pernicious
(B) patrimony..depraved
(C) salutatory..bracing
(D) elixir..blatant
(E) cudgel..brusque

49. Returning home for vacation, I learned that my mother's new medicine had made her extremely_____ and _____ .
(A) articulate..copious
(B) doltish..overt
(C) autocratic..congruent
(D) torpid..phlegmatic
(E) ludicrous..remiss

50. When I interviewed for a journalist's position, I was told that often the editor was very _____; he made numerous _____.
(A) sedentary..rifts
(B) fastidious..emendations
(C) saline..parables
(D) maudlin..orifices
(E) onerous..idylls

ANSWER KEY

1.	A	11.	C	21.	A	31.	C	41.	D
2.	D	12.	B	22.	D	32.	D	42.	C
3,	C	13.	D	23.	B	33.	B	43.	C
4.	B	14.	E	24.	D	34.	C	44.	A
5.	D	15.	E	25.	B	35.	D	45.	A
6.	B	16.	E	26.	C	36.	B	46.	A
7.	D	17.	C	27.	B	37	B	47.	B
8.	A	18.	B	28.	B	38.	C	48.	C
9.	C	19.	C	29.	B	39.	E	49.	D
10	C	20.	B	30.	B	40	A	50.	B

SENTENCE CORRECTION TEST

30 QUESTIONS

15 MINUTES

DIRECTIONS In each problem below, either part or all of the sentence is underlined. The sentence is followed by five ways of writing the underlined part. Choice (A) repeats the original; the other answer choices vary. If you think that the original phrasing is the best, choose (A). If you think one of the other answer choices is the best, select that choice.

1. A career in the medical profession, <u>which requires an enormous investment of time and money, do not guarantee success as there is so much competition.</u>

   (A) which requires an enormous investment of time and money, do not guarantee success as there is so much competition.

   (B) which requires an enormous investment of time and money, does not guarantee success since there is so much competition.

   (c) requiring an enormous investment of time and money, without guarantee because there is so much competition.

   (D) requires an enormous investment of time and money, and it cannot guarantee success because there is so much competition.

   (E) requires that an enormous investment of time and money be made and success cannot be guaranteed due to the competition.

2. <u>It was believed that a thorough knowledge of Latin would not only enable students to read the classics, also enabling them to think clearly and precisely.</u>

   (A) it was believed that a thorough knowledge of Latin would not only enable students to read the classics, also enabling them to think clearly and precisely.

   (B) it had been believed that a thorough knowledge of Latin would not only enable students to read the classics but rather enable them to think clearly and precisely.

   (c) it was believed that a thorough knowledge of Latin would not only enable students to read the classics but also enabling them to think clearly and precisely.

   (D) it used to be believed that a thorough knowledge of Latin would enable a student to be able to read the classics but also enable them to think clearly and precisely.

   (E) it was believed that a thorough knowledge of Latin would enable students not only to read the classics, but also to think clearly and precisely.

3. Most adolescents struggle to be free <u>both of parental domination but also from peer pressure.</u>

   (A) both of parental domination but also from per pressure

   (B) both peer of parental domination and also from peer pressure.

   (C) both of parental domination and of peer pressure.

   (D) both of parental domination and of peer pressure as well.

   (E) of parental domination and their peer pressure as well.

4. The president of the block association tried to convince her neighbors <u>they should join forces to prevent crime in the neighborhood rather than continuing to be victimized.</u>

   (A) they should join forces to prevent crime in the neighborhood rather than continuing to be victimized.

   (B) that they should join forces to prevent crime in the neighborhood rather than continue to be victimized.

   (C) about joining forces to prevent crime in the neighborhood instead of continuing to be victimized.

   (D) for the joining of forces to prevent crime in the neighborhood rather than continue to be victimized.

   (E) to join forces to prevent crime in the neighborhood rather than continuing to be victimized.

5. <u>Although he is as gifted as, if not more gifted than many of his colleagues, he is extremely modest and his poetry is unpublished.</u>

   (A) Although he is as gifted as, if not more gifted than many of his colleagues, he is extremely modest and his poetry is unpublished.

   (B) Although he is as gifted, if not more gifted, than many of his colleagues, he is extremely modest with his poetry remaining unpublished.

   (C) Although he is as gifted as, if not more gifted than, many of his colleagues, he is extremely modest and will not publish his poetry.

   (D) Despite his being gifted, if not more gifted than his colleagues, he is extremely modest and will not publish his poetry.

   (E) Being as gifted as, or more gifted than, many of his colleagues, he is extremely modest and his poetry is unpublished.

6. Although the manager agreed to a more flexible work schedule, <u>he said that it must be posted on the bulletin board so that both management and labor will know what everyone is</u> assigned to do.

   (A) he said that it must be posted on the bulletin board so that both management and labor will know what everyone is

   (B) he said it had to be posted on the bulletin board so that both management and labor knows what everyone is

   (C) he said that they have to post the assignment on the bulletin board so that management and labor knew what everyone was

   (D) he said the schedule would have to be posted on the bulletin board so that both management and labor would know what everyone was

   (E) saying that the schedule had to be posted on the bulletin board so that both management and labor would know what everyone had been

7. With just several quick strokes of the pen, <u>the monkeys were drawn by the artist, capturing their antics.</u>

   (A) the monkeys were drawn by the artist, capturing their antics.

   (B) the artist sketched the monkeys, capturing their antics.

   (C) the artist captured the antics of the monkeys, sketching them.

   (D) the artist sketched the monkeys and also capturing their antics.

   (E) the monkeys and their antics were sketched by the artist.

8. Primarily accomplished through the use of the electron microscope, researchers have recently vastly increased their knowledge of the process of cell division.

(A) Primarily accomplished through the use of the electron microscope,

(B) Through the competent use of advanced electron microscopy,

(C) Primarily through the use of electron microscopy

(D) In a large sense through the use of the electron microscope,

(E) In the main, particularly through the use of electron microscopes,

9. Though garlic is often associated with Italian cuisine, it is actually the use of oregano which most distinguishes the Italians from the French.

(A) which most distinguishes the Italians from the French

(B) which primarily distinguishes Italians from Frenchmen

(C) which generally serves to distinguish an Italian sauce from a French one

(D) which is the major distinction between the two great cuisines

(E) which most distinguishes Italian cookery from French

10. While controversy rages over whether the sign language taught to some great apes is truly human-like speech, there is no similar dispute that our powers of communication are greater by far than that of any other animal.

(A) are greater by far than that of any other animal

(B) are far greater than that of any other animal

(C) are greater by far than any other animal

(D) are far greater than those of any other animal

(E) have been far greater than those of other animals

11. Despite the money that has been invested by industry in the attempt to persuade Americans that highly processed foods are the best foods, the populace stubbornly clings to the belief that such foods are neither particularly healthy or tasty.

(A) are neither particularly healthy or tasty

(B) are neither particularly healthful nor tasty

(C) are not particularly health or tasty

(D) are not particularly healthful or tasteful

(E) are not very healthy nor tasty

12. While it is certainly true that almost all literate citizens could be taught to improve their ability to read and reason, it must first be demonstrated that such an undertaking would increase the general welfare.

(A) While it is certainly true that almost all literate citizens could be taught to improve their ability to read and reason, it must first be demonstrated that such an undertaking would increase the general welfare

(B) While it is certainly true that almost all literate citizens could improve their reading and reasoning skills, such a vast undertaking requires a clear demonstration of benefit before being undertaken

(C) Before undertaking to improve the reading and reasoning of almost all citizens, it is necessary to show that the project will work.

(D) Before the project of improving almost all citizens' reading and reasoning skills is undertaken, that the outcome will be increased happiness must be demonstrated.

(E) Prior to the improvement of citizens' reading and reasoning skills it must be show that they will be happier with the improved skills than they are now.

13. The closing of small, inexpensive hospitals while large expensive hospitals remain open seems a luxury that we can no longer afford in order to maintain them.

(A) seems a luxury that we can no longer afford in order to maintain them

(B) seems to emphasize luxury over economy, which we can no longer afford

(C) seems to be a waste of valuable resources

(D) seems a luxury we can no longer afford

(E) seems too luxurious to be any longer affordable

14. The ancient question of the exact difference between plants and animals, which was so complicated with the discovery of microscopic members of both groups, was somewhat side-stepped with the establishment of a third phylum, the Protista reserved just for them

(A) reserved just for them

(B) consisting only of them

(C) inhabited only by them

(D) which includes all microscope life

(E) which would have included all microscopic plants and animal.

15. The Lake Manyara Park in Tanzania affords the visitor with unequaled opportunities to photograph lion playing in trees without the - aid of telephoto lenses.

(A) The Lake Manyara Park in Tanzania affords the visitor with unequaled opportunities to photograph lions playing in trees without the aid of telephoto lense..

(B) The Lake Manyara Park in Tanzania permits the visitor unequaled opportunities to photograph lions playing in trees without the aid of telephoto lenses.

(C) The Lake Manyara in Tanzania gives the visitor the unequaled opportunity to photograph lions playing in trees without the aid of telephoto lenses.

(D) The visitor to the Lake Manyara Park in Tanzania has the unequaled opportunity to photograph lions playing in trees without the aid of telephoto lenses.

(E) Even without the aid of telephoto lenses, the visitor to Tanzania's Lake Manyara Park has an unequaled opportunity to photograph lions playing in trees.

16. In the Renaissance, painters were so impressed with da Vinci that they ignored their own training and designated as a masterpiece anything he painted.

(A) were so impressed with da Vinci that they ignored

(B) were impressed with da Vinci to such an extent that they were to ignore

© were so impressed with da Vinci as to ignore

(D) were so impressed with da Vinci that they had to ignore

(E) were as impressed with da Vinci as to ignore

17. Most member of the trade union rejected the mayor's demand that they return to work.

(A) that they return to work.

(B) that the members return to work.

(C) for them to return to work.

(D) that they would return to work.

(E) that they ought to return to work.

18. The players were often punished by the referee's lack of alertness who penalized all those who were involved in fighting regardless of who had instigated it.

(A) The player were often punished by the referee's lack of alertness who penalized

(B) The referee's lack of alertness often caused him to penalize

(C) The players were punished by the lack of alertness of the referee who penalized often

(D) Lacking alertness, the referee's choice was to penalize often

(E) His lack of alertness to brutality often caused the referee to penalize

19. The New York City Police Development was not only responsible for the maintenance of order in the metropolitan area but also for rebuilding the bonds among the various ethnic groups.

(A) not only responsible for the maintenance of order in the metropolitan area but also for rebuilding the bonds

(B) responsible not only for maintaining order in the metropolitan area but also rebuilding the bonds

(C) responsible not only for the maintenance of order in the metropolitan area and also for rebuilding

(D) responsible not only for the maintenance of order in the metropolitan area and also for the rebuilding bonds

(E) not only responsible for maintaining order in the metropolitan area but also for rebuilding the bonds

20. In comparison with the Literature created by the ancient Greeks, today Greeks have written nothing worth describing.

(A) In comparison with the Literature created by the ancient Greeks, today's Greeks have written nothing worth describing.

(B) In comparison with the literature created by the ancient Greeks, the Literature of today's Greek's are containing nothing worth describing

(C) Compared to that of the ancient Greeks, today's Greeks have written worth describing.

(D) Compared to that of ancient Greeks, the Literature of today's Greeks is not worth describing

(E) Compared to the ancient Greeks literature, today's Greeks have written nothing worth describing.

21. Steve, along with his oldest brothers, are going to make a large real estate investment.

(A) Steve, along with his brothers, are

(B) Steve along with his oldest brother is

(C) Steve, in addition to his oldest brother, are

(D) Steve, as well as his oldest brothers, are

(E) Steve and his oldest brother is

22. During the war, when it looked as if the German army was going to cross into France, English mercenaries joined the French to resist the assault.

(A) it looked as if the German army was going to cross

(B) it looked like the German army was going to cross

(C) it looked like the German army would have crossed

(D) appearance were that the German army would be crossing

(E) it appeared that the German army would cross

23. In starting the argument that the President does care about the plight of the poor, a prominent Democrat inferred that Republicans have never been concerned about them.

(A) a prominent Democrat inferred that Republicans have never been concerned about them.

(B) a prominent Democrat inferred that Republicans have never been concerned about the poor

(C) a prominent Democrat implied that Republicans have never been concerned about them

(D) a prominent Democrat inferred that Republicans have never been concerned about it.

(E) a prominent Democrat implied that Republicans have never been concerned about it.

24. Many travelers stated unequivocally that the streets in Paris are more beautiful than any other city.

(A) that the streets in Paris are more beautiful than any other city.

(B) that the streets in Paris are more beautiful than those in any other city.

(C) that Parisian streets are more beautiful than in any other city.

(D) that, unlike any other city, Parisian streets are more beautiful

(E) that the streets of Paris are more beautiful than the streets in any other city.

25. The mayor's media advisor, together with his three top aides, are traveling with him on a tour of European capital cities

(A) media advisor, together with his three top aides, are

(B) media advisor, also his three top aides, are

(C) media advisor, as well as his three top aides, is

(D) media advisor, along with his three top aides, are

(E) media advisor, all in the company of his three top aides, is

26. Lawyers and doctors alike both agree that something should be done about the rise in medical malpractice suits which are on the increase.

(A) alike both agree that something should be done about the rise in medical malpractice suits which are on the increase

(B) alike agree that something should be done about the rise in medical malpractice

(C) both agree that something should be done about the increasing rise in medical malpractice suits

(D) agree that something should be done about the rise in medical malpractice suits, which are increasing

(E) agree that something should be done about the rise in the number of medical malpractice suits

27. The obviously bitter actress stated that had the director known what he was doing, the play would have run for more than one night

(A) had the director known what he was doing, the play would have run

(B) if the director would have known what he was doing, the play would have run

(C) if the director had known what he was doing, they would run

(D) had the director known what he was doing, they would run

(E) if the director knew what he was doing, they would have run

28. Dr. Smith's findings that emotions affect blood pressure are different from those published by his colleague, Dr. Loeb.

(A) affect blood pressure are different from those

(B) effect blood pressure are different from those

(C) effect blood pressure are different than those

(D) affect blood pressure are different than those

(E) affect blood pressure are different from that

29. Entering professional tennis as a talented but shy and awkward teenager, for the past eight years Steffi Graf was the dominant force on the woman's circuit, a powerful and consistent player.

(A) Entering professional tennis as a talented but shy and awkward teenager, for the past eight years Steffi Graf was

(B) A talented yet shy and awkward teenager when she entered professional tennis, for the last eight years Steffi Graf has been

(C) Steffi Graf entered professional tennis as a talented yet shy and awkward teenager, and was

(D) For the past eight years, having entered professional tennis as a talented yet shy and awkward teenager, Steffi Graf has been

(E) Having entered professional tennis as a teenager who was talented yet shy and awkward, for the past eight years Steffi Graf has been

30. The jurors agreed that of all reasons the defense attorney gave for finding his client not guilty, the last two of them were the most absurd.

(A) the last two of them were the most absurd

(B) the latter two were the most absurd

(C) the last two of these were the most absurd

(D) the last two of them were the absurdest

(E) the last two were the most absurd

ANSWER KEY

1.	B	11.	B	21.	B
2.	E	12.	A	22.	E
3.	D	13.	D	23.	E
4.	B	14	D	24.	B
5.	C	15.	E	25.	C
6.	A	16.	C	26.	E
7.	B	17.	A	27.	A
8.	C	18.	B	28.	A
9.	E	19.	B	29.	D
10.	D	20.	D	30.	E

ANTONYMS TEST

100 QUESTIONS
15 MINUTES

DIRECTIONS

Each question below consists of a word printed in capital letters, followed by five lettered words or phrases. Choose the lettered word or phrase that is most nearly opposite in meaning to the word in capital letters. Since some of the questions require you to distinguish fine shades of meaning, be sure to consider all the choices before deciding which on is best.

1. INTREPID
(A) scurrilous
(B) pusillanimous
(C) propitious
(D) mettlesome
(E) militant

2. EFFRONTERY
(A) timidity
(B) palpable
(C) raillery
(D) libel
(E) forensic

3. TURBULENT
(A) quiescent
(B) cursory
(C extol
(D) gyrate
(E) imbibe

4. INEXORABLE
(A) surreptitious
(B) tractable
(C) jaded
(D) iconoclast
(E) garish

5. PEREMPTORY
(A) glaucous
(B) Docile
(C extricate
(D) panegyric
(E) mnemonics

6. SAGACIOUS
(A) trepidation
(B) perspicuity
(C) frugal
(D) garish
(E) ignorant

7. TRUNCATE
(A) enlarge
(B) extrude
(C) intrepid
(D) pique
(E) vacillate

8. UNCOUTH
(A) urbane
(B) travail
(C) sentient
(D) prevaricate
(E) maladroit

9. ZEAL
(A) flail
(B) impute
(C) ignoble
(D) affable
(E) indifference

10. EMPYREAN
(A) amenity
(B) corpulent
(C) exonerate
(D) hellish
(E) indolent

11. JUDICIOUS
(A) incongruous
(B) poignant
(C) imprudent
(D) volition
(E) syncopate

12. VOCIFERATE
(A) turgid
(B) listen
(C) resurgent
(D) rapacity
(E) vilify

13. ABJURE
(A) venerate
(B) maintain
(C) transpire
(D) obdurate
(E) lacerate

14. RECALCITRANT
(A) submissive
(B) paroxysm
(C) cryptic
(D) exhort
(E) divert

15. OBDURATION
(A) exogenous
(B) approbation
(C) decry
(D) covetous
(E) deference

16. ENCOMIUM
(A) censure
(B) invoke
(C) sequence
(D) coherence
(E) paradox

17. FLUCTUATE
(A) magnate
(B) canter
(C inflate
(D) spin
(E) stabilize

18. MITIGATE
(A) lie
(B) correct
(C) increase
(D) remark
(E) integrate

19. ANOMALOUS
(A) audacious
(B) congruous
(C) obsolete
(D) ominous
(E) chronicle

20. TIMOROUS
(A) daring
(B) rigorous
(C) perceptive
(D) frugal
(E) unctuous

21. LACERATE
(A) mend
(B) tolerate
(C) profligate
(D) accept
(E) masticate

22. CIRCUMSPECT
(A) negligent
(B) fortuitous
(C) delude
(D) repressive
(E) extrinsic

23. FLASCO
(A) production
(B) gamut
(C) analysis
(D) success
(E) allegory

24. ETIOLATE
(A) relegate
(B) facilitate
(C clean
(D) stain
(E) discuss

25. HERETIC
(A) exorbitant
(B) verbal
(C) orthodox
(D) clerical
(E) stoic

26. PREDILECTION
(A) seclusion
(B) limpid
(C) repulsion
(D) anachronism
(E) gibe

27. LACONIC
(A) cogent
(B) voluble
(C) prodigal
(D) dulcet
(E) acme

28. MENDACIOUS
(A) honest
(B) adroit
(C) theological
(D) vituperative
(E) harsh

29. ANTEDILUVIAN
(A) foible
(B) modern
(C) affable
(D) pragmatic
(E) foment

30. MOTLEY
(A) vermilion
(B) malaise
(C) aphorism
(D) fecund
(E) homogeneous

31. SVELTE
(A) limber
(B) lissome
(C) adipose
(D) vile
(E) disingenuous

32. ENCOMIUM
(A) panegyric
(B) censure
(C) declamation
(D) oratory
(E) pastiche

33. CONNOISSEUR
(A) sycophant
(B) zealot
(C) hedonist
(D) pariah
(E) tyro

34. CELERITY
(A) splendor
(B) alacrity
(C) luster
(D) indolence
(E) declivity

35. DISSENSION
(A) desolation
(B) strife
(C) mandate
(D) concord
(E) dearth

36. REPREHENSIBLE
(A) docile
(B) inculpable
(C) dubious
(D) usurious
(E) diffident

37. DELETERIOUS
(A) volatile
(B) enigmatic
(C) fulsome
(D) esoteric
(E) salutary

38. OBFUSCATE
(A) simulate
(B) palliate
(C) compliment
(D) elucidate
(E) portend

39. INVEIGLE
(A) inveigh
(B) repulse
(C) malinger
(D) herald
(E) impugn

40. SATURNALIAN
(A) sardonic
(B) ascetic
(C) nascent
(D) envisaged
(E) insolvent

41. MELLIFLUOUS
(A) sugary
(B) resonant
(C) risible
(D) supercilious
(E) cacophonous

42. PECCADILLO
(A) sin
(B) pedantry
(C) virtue
(D) riata
(E) condolence

43. VACUOUS
(A) multifarious
(B) amorous
(C) clandestine
(D) perspicacious
(E) inane

44. GAUCHE
(A) adroit
(B) devious
(C) prosaic
(D) volatile
(E) dormant

45. SPURIOUS
(A) bogus
(B) hackneyed
(C) affable
(D) authentic
(E) peremptory

46. RATIOCINATION
(A) schism
(B) fallacy
(C) arithmetic
(D) paradigm
(E) redress

47. INTRANSIGENT
(A) meretricious
(B) muddled
(C) cooperative
(D) nonchalant
(E) willful

48. MAVERICK
(A) reagin
(B) nomenclature
(C) conformist
(D) heroic
(E) tattoo

49. SEDULOUS
(A) tangential
(B) rampant
(C) esoteric
(D) morose
(E) indolent

50. OBDURATE
(A) ambiguous
(B) demoralized
(C) vitriolic
(D) malleable
(E) inimitable

51. COVERT
(A) protracted
(B) insensitive
(C) reclining
(D) open
(E) taxing

52. SALIENT
(A) insignificant
(B) climactic
(C) worrisome
(D) awesome
(E) radical

53. MORIBUND
(A) contentious
(B) malignant
(C) pretentious
(D) detestable
(E) vital

54. PLIANT
(A) humble
(B) rigid
(C) tactful
(D) earnest
(E) solemn

55. DORMANT
(A) authoritative
(B) elastic
(C) active
(D) uninteresting
(E) endearing

56. PLACATE
(A) abet
(B) enrage
(C) invite
(D) witness
(E) repent

57. EXTRANEOUS
(A) outlandish
(B) tumultuous
(C) impetuous
(D) cental
(E) guarded

58. RENOWN
(A) suggestiveness
(B) superficiality
(C) anonymity
(D) deviousness
(E) valor

59. REVERE
(A) collide
(B) succumb
(C) threaten
(D) divide
(E) despise

60. BOORISH
(A) juvenile
(B) well-mannered
(C) weak-minded
(D) unique
(E) concealed

61. WHIMSICAL
(A) chivalrous
(B) perfect
(C) predictable
(D) hidden
(E) backward

62. NASCENT
(A) full developed
(B) extremely valuable
(C) well-regarded
(D) informative
(E) measurable

63. INURED
(A) authoritative
(B) dissolute
(C) bereft
(D) sensitive
(E) taxing

64. IRASCIBLE
(A) even-tempered
(B) well-informed
(C) repetitious
(D) motionless
(E) synchronous

65. EXONERATE
(A) testify
(B) engender
(C) accuse
(D) inundate
(E) abrogate

66. ALACRITY
(A) skullduggery
(B) reluctance
(C) interment
(D) bellicosity
(E) specificity

67. DIFFERENCE
(A) strong attraction
(B) violent disagreement
(C) haughty arrogance
(D) grievous error
(E) temporary suspension

68. PARSIMONY
(A) contraband
(B) stealth
(C) torpor
(D) generosity
(E) defoliation

69. ASPERITY
(A) smoothness
(B) fabrication
(C) duplicity
(D) indolence
(E) intercession

70. IGNOMINIOUS
(A) melancholy
(B) cantankerous
(C) symmetrical
(D) honorable
(E) calamitous

71 ZEALOT
(A) Heretic
(B) Hypocrite
(C) Person is careless
(D) Person who is rich
(E) Person who is indifferent

72. ABSTEMIOUS
(A) Fastidious
(B) Punctilious
(C) Pusillanimous
(D) Dissipated
(E) Prodigal

73. SATIETY
(A) Starvation
(B) Dissatisfaction
(C) Pretense
(D) Lowest class
(E) Grandeur

74. DECIDUOUS
(A) Undecided
(B) Hesitant
(C) Evergreen
(D) Annual
(E) Perennial

75. INNOCUOUS
(A) Large
(B) Toxic
(C) Spotless
(D) Impeccable

76. GERMANE
(A) Teutonic
(B) Healthful
(C) irrelevant
(D) massive
(E) puny

77. EGREGIOUS
(A) Notorious
(B) Splendid
(C) Abortive
(D) Maturing
(E) Birdlike

78. NEPOTISM
(A) Midnight
(B) Partiality
(C) Impartiality
(D) Dawn
(E) Noon

79. AUTONOMOUS
(A) Magnanimous
(B) Ambiguous
(C) EXIGUOUS
(D) Dependent
(E) operated by hand

80. EXCULPATE
(A) Pardon
(B) Destroy
(C) Create
(D) Convict
(E) Admonish

81. EARTHY
(A) Pithy
(B) Salty
(C) Watery
(D) Refined
(E) Moldy

82. CONTENTIOUS
(A) Pacific
(B) Bellicose
(C) Satisfied
(D) Dissatisfied
(E) Hungry

83. GAINSAY
A. Deny
B. Lose money
C. Audit
D. Applaud
E. Affirm

84. AMELIORATE
A. Harden
B. Coarsen
C. Aggravate
D. Improve
E. Scrape

85. IGNOMINIOUS
A. Disgraceful
B. Erudite
C. Scholarly
D. Incognito
E. Laudatory

86. EVANESCENT
A. Permanent
B. Incandescent
C. Ephemeral
D. Putrid
E. Perfunctory

87. CORPULENT
A. Sallow
B. Cooperative
C. Emaciated
D. Enterprising
E. Red-blooded

88. JOCUND
A. Round
B. Flat
C. Jocular
D. Jugular
E. Melancholy

89. HIBERNAL
A. Irish
B. Estival
C. English
D. Festival
E. Wintry

90. EBULLIENT
A. Intoxicated
B. Placid
C. Effervescent
D. Gregarious
E. jovial

91. ASSUAGE
A. Solve
B. Abate
C. Isolate
D. Irritate
E. Demonstrate

92. INDIGENOUS
A. Alien
B. Pleasing
C. Comestible
D. Disgusting
E. Irate

93. DEARTH
A. Birth
B. Scantiness
C. Abundance
D. Brilliance
E. morning

94. DELETERIOUS
A. Sane
B. Intoxicated
C. Sober
D. Wholesome
E. Adding

95. EXEMPLARY
- A. Deplorable
- B. Imitative
- C. Outstanding
- D. Particular
- E. Additional

96. FELL
- A. Downed
- B. Risen
- C. Propitious
- D. Cruel
- E. Official

97. CHOLERIC
- A. Red
- B. Serene
- C. Severe
- D. Stern
- E. Irritable

98. BAROQUE
- A. Common
- B. Boatlike
- C. Rococo
- D. Simple
- E. Stupid

99. DILETTANTE
- A. Amateur
- B. Professional
- C. Postponement
- D. Party
- E. Frenzy

100 AMORPHOUS
- A. Diaphonic
- B. Translucent
- C. Organized
- D. Opaque
- E. Chaotics

ANSWER KEY

1.	B	21.	A	41.	E	61.	C	81.	D
2.	A	22.	A	42.	C	62.	A	82.	A
3.	A	23.	D	43.	D	63.	A	83.	E
4.	B	24.	D	44.	A	64.	E	84.	C
5.	B	25.	C	45.	D	65.	C	85.	E
6.	E	26.	C	46.	B	66.	B	86.	A
7.	A	27.	B	47.	C	67.	C	87.	C
8.	A	28.	A	48.	C	68.	D	88.	E
9.	E	29.	B	49.	E	69.	A	89.	B
10.	D	30.	E	50.	D	70.	D	90.	B
11.	C	31.	C	51.	D	71.	E	91.	D
12.	B	32.	B	52.	A	72.	D	92.	A
13.	B	33.	E	53.	E	73.	A	93.	C
14.	A	34.	D	54.	B	74.	C	94.	D
15.	E	35.	D	55.	C	75.	B	95.	C
16.	A	36.	B	56.	B	76.	C	96.	A
17.	E	37.	E	57.	D	77.	B	97.	B
18.	C	38.	D	58.	C	78.	C	98.	E
19.	B	39.	B	59.	E	79.	D	99.	B
20.	A	40.	B	60.	C	80.	D	100.	C

SYNONYMS TEST

100 QUESTIONS
20 MINUTES

DIRECTIONS Selected the word or phrase closest in meaning to the given word. Mark its letter on the answer select 48.

1. HIRSUTE
   (A) Damp
   (B) Formerly
   (C) Humorous
   (D) Formerly
   (E) Sad

2. PANACEA
   (A) Pancake
   (B) Praise
   (C) Inactivity
   (D) Cure-all
   (E) Talk

3. CELIBATE
   (A) Single
   (B) Double
   (C) Married
   (D) Bald
   (E) Hypocritical

4. CHASTEN
   (A) Discipline
   (B) Pursue
   (C) Sanctify
   (D) Stop
   (E) Start

5. MERETRICIOUS
   (A) Conspicuous
   (B) Blonde
   (C) Tawdry
   (D) Angry
   (E) Aping

6. REQUIEM
   (A) Recess
   (B) Assignment
   (C) Profanity
   (D) Dirge
   (E) musing

7. EFFIGY
   (A) Proxy
   (B) Profundity
   (C) Boldness
   (D) Exit
   (E) Dummy

8. BLISSFUL
   (A) Maudlin
   (B) Dour
   (C) Beatific
   (D) Moot
   (E) Modish

9.. HOMOGENEOUS
   (A) Heterogeneous
   (B) Motley
   (C) Scrambled
   (D) Different
   (E) Similar

10. WRAITH
   (A) Apparition
   (B) Garland
   (C) Christmas decoration
   (D) Anger
   (E) Excitement

11. DISPARITY
   (A) Argumentation
   (B) Difference
   (C) Belittlement
   (D) Harmony
   (E) Discord

12. VARIEGATE
   (A) Set type
   (B) Multi-color
   (C) Differ
   (D) Reject
   (E) Reply in kind

13. FILCH
   (A) Pretend
   (B) Dirty
   (C) Embarrass
   (D) Steal
   (E) Honor

14. INFINITE
   (A) Strange
   (B) Verbal
   (C) Indefinite
   (D) endless
   (E) Vague

15. DEMISE
   (A) Residence
   (B) Dismissal
   (C) Accident
   (D) Act
   (E) Death

16. FRUGALITY
   (A) Extravagance
   (B) Ripening
   (C) thrift
   (D) Resentment
   (E) Miserliness

17. UNEQUALED
   (A) Outstanding
   (B) Different
   (C) Praise
   (D) Unique
   (E) Strange

18. Adversity
   (A) Opponent
   (B) Hardship
   (C) Opening
   (D) Public announcemen
   (E) Agency

19. FASTIDIOUS
   (A) Speedy
   (B) Precise
   (C) Squeamish
   (D) Hungry
   (E) Slow

20. DISCONCERT
   (A) Sing in harmony
   (B) Pretend
   (C) Cancel program
   (D) Confuse
   (E) Interrupt

21. GARRULOUS
   (A) Laconic
   (B) Strangling
   (C) Ecstatic
   (D) Frozen
   (E) Wordy

22. MORES
   (A) Morals
   (B) Customs
   (C) Taxes
   (D) Fiscal year
   (E) Swamp

23. VESTIGE
   (A) Clothing
   (B) Trace
   (C) Undergarment
   (D) Hallway
   (E) Hope

24. PERFUNCTORY
   (A) Thorough
   (B) Impossible
   (C) Lively
   (D) Listless
   (E) Sly

25. INDIGENCE
(A) Nativity
(B) Tolerance
(C) Gossiping
(D) Poverty
(E) Eating

26. VIRAGO
(A) Bacillus
(B) Chastity
(C) Shrew
(D) Wanton
(E) Tirade

27. PERSIFLAGE
(A) Banter
(B) Oppression
(C) Sarcasm
(D) Bigotry
(E) Simile

28. LOQUACIOUS
(A) Situated
(B) Gregarious
(C) Taciturn
(D) Antisocial
(E) Garrulous

29. PHLEGMATIC
(A) Stolid
(B) Respiratory
(C) Animated
(D) Pneumatic
(E) Aroused

30. SATURININE
(A) Planetary
(B) Gloomy
(C) Astronomic
(D) Hopeful
(E) Temperate

31. MSANTHROPY
(A) Badinage
(B) Generous
(C) Vivacity
(D) Miserliness
(E) Hatred

32. CHICANERY
(A) Foulness
(B) Aroma
(C) Chastity
(D) Trickery
(E) Poultry

33. PENURY
(A) Custom
(B) Poverty
(C) Numismatics
(D) Affluence
(E) Criminology

34. EXPIATED
(A) Vapid
(B) Assumed
(C) Disinclined
(D) Atoned
(E) Eroded

35. VINDICTIVE
(A) Revengeful
(B) Triumphant
(C) Strategic
(D) Demonstrate
(E) Bigoted

36. FRUSTRATION
(A) Satiety
(B) Facility
(C) Thwarting
(D) Nostalgia
(E) Lethargy

37. PUNCTILIOUS
(A) Scrupulous
(B) Varied
(C) ready
(D) Prompt
(E) Vicarious

38. HAGGARD
(A) Gaunt
(B) Irascible
(C) Wise
(D) Sluggish
(E) Witty

39. STAID
(A) Weary
(B) Remaining
(C) Sedate
(D) Afraid
(E) Unkempt

40. PEDAGOGUE
(A) Demagogue
(B) Peddler
(C) Bicylist
(D) Teacher
(E) Pupil

41. DECOROUS
(A) Adorned
(B) Ugly
(C) Insane
(D) Proper
(E) Childish

42. ONEROUS
(A) Possessive
(B) Proud
(C) Droll
(D) Burdensome
(E) Sly

43. EXPEDIENT
(A) Precise
(B) Expert
(C) Expendable
(D) Advisable
(E) Erratic

44. SUCCULENT
(A) Asking help
(B) Wicked
(C) Anxious
(D) Concise
(E. Juicy

45. NEPOTISM
(A) Favoritism
(B) Pool
(C) Philosophy
(D) Rule of a despot
(E) Hedonism

46. PROPENSITY
(A) Inclination
(B) Intelligence
(C) Probity
(D) Dishonesty
(E) Act

47. TOWRDY
(A) Refined
(B) Yellow-orange
(C) Ancient
(D) Forward
(E) Gaudy

48. INCULCATE
(A) Corroborate
(B) Lack
(C) Teach
(D) Destroy
(E) Avenge

49. TORTUOUS
(A) Winding
(B) Sadistic
(C) Cruel
(D) Like a turtle
(E) Carefree

50. MOLLIFY
(A) Sweeten
(B) Appease
(C) Applaud
(D) Worry
(E) Discourage

51. REGIME
(A) Military group
(B) Summary
(C) Rule
(D) Estimate
(E) Manor

52. TENACITY
(A) Persistence
(B) Game played on grass
(C) Large town
(D) Indifference
(E) Ecstasy

53. PROFESSEDLY
(A) Meekly
(B) Cruelly
(C) Bravely
(D) Pedantically
(E) Ostensibly

54. RETROSPECT
(A) Special kind of telescope
(B) Microscope
(C) Prism
(D) Review of the past
(E) Forecast of future events

55. IMPECCABLE
(A) Poverty-stricken
(B) Faultless
(C) Dirty
(D) Criminal
(E) Impervious

56. ABETTOR
(A) Gambler
(B) Slaughter-house
(C) Encourage
(D) Factor
(E) Author

57. DEBILITATE
(A) Argue
(B) Engage
(C) Remove hair
(D) Sooth
(E) Enfeeble

58. JUNTO
(A) Junction
(B) Jungle
(C) Small boat
(D) Secret faction
(E) Embrace

59. HARASS
(A) Annoy
(B) Harness
(C) Involve
(D) Injure
(E) Consider

60. ERUDITE
(A) Rough
(B) Unpolished
(C) Scholarship
(D) Magnificent
(E) Ornate

61. ABRADE
(A) Rub off
(B) Bleed
(C) Embellish
(D) Erase
(E) Poison

62. INANE
(A) Lifeless
(B) Senseless
(C) Hopeless
(D) Faithless
(E) Crazy

63. CULPABLE
(A) Free
(B) Guilty
(C) Vindicable
(D) Wholesome
(E) Vindictive

64. INGENUOUS
(A) Sophisticated
(B) Clever
(C) Cunning
(D) Naive
(E) Artificial

65. FEALTY
(A) Sense of touch
(B) Loyalty
(C) Anger
(D) Anxiety
(E) Personality

66. COGENT
(A) Geared
(B) Formidable
(C) Strong
(D) Weak
(E) Convincing

67. EXPUNGE
(A) Rationalize
(B) Purge
(C) Exhale
(D) Eradicate
(E) Assign

68. INDIGENOUS
(A) Wealthy
(B) Having stomach trouble
(C) scholarship
(D) Native
(E) Bald

69. CONDIMENT
(A) Vegetable
(B) Salad
(C) Meat dish
(D) Relish
(E) Sugar

70. FORTUITOUS
(A) Lucky
(B) Accidental
(C) Rich
(D) Prearranged
(E) Concerted

71. ADIPOSE
(A) Liquid
(B) Weighty
(C) Major
(D) Sharp
(E) Fatty

72. DUPLICITY
(A) two-pronged spear
(B) Mimeograph
(C) Hypocrisy
(D) Candor
(E) Two-story apartment

73. CRYPTIC
(A) Obscure
(B) Written
(C) Copied
(D) Dead
(E) Puzzling

74. HOMILY
(A) Cereal
(B) Household
(C) Sermon
(D) Pension
(E) Suburb

75. DORMANT
(A) Animated
(B) Hibernating
(C) Active
(D) Vigorous
(E) Birdlike

76. ASPERITY
(A) Roughness
(B) Dream
(C) Ambition
(D) Smoothness
(E) Sarcastic remark

77. ALTERCATION
(A) Adjustment
(B) Repair
(C) Quarrel
(D) Split personality
(E) Echo

78. CAPTIOUS
(A) Prominent
(B) Carping
(C) Critical
(D) Caustic
(E) Epigrammatic

79. ACCOLADE
(A) Balcony
(B) Outer garment
(C) Drink
(D) Honor
(E) Fruit

80 DEPRECATE
(A) Plead earnestly against
(B) Denounce
(C) Belittle
(D) Devaluate
(E) Dishonor

81. BOMBASTIC
(A) Inflated
(B) Explosive
(C) Retaliatory
(D) Meek
(E) Enraged

82. INTER
(A) Carry
(B) Hint
(C) Bury
(D) Interfere
(E) Act as go-between

83. ACUMEN
(A) Keenness
(B) Brilliance
(C) Swiftness
(D) Greediness
(E) Ferocity

84. INUNDATE
(A) Overwhelm
(B) Surrender
(C) Flood
(D) Destroy
(E) Conquer

85. CANTATA
(A) Symphony
(B) Concerto
(C) Opera
(D) Choral work
(E) Military march

86. SUMPTUOUS
(A) Swampy
(B) Irritable
(C) Meagre
(D) Fancy
(E) Lavish

87. TRACTABLE
(A) Practicable
(B) Amenable
(C) Indisposed
(D) Critical
(E) Artistic

88. QUERULOUS
(A) Questioning
(B) Critical
(C) Complaining
(D) Curious
(E) Ambiguous

89. MOROSE
(A) Calm
(B) Gloomy
(C) Misty
(D) Damp
(E) Diseased

90. SURMISE
(A) Dawn
(B) Plan
(C) Unexpected event
(D) Tragedy
(E) Quess

91. UBIQUITOUS
(A) Affluent
(B) Resigning
(C) Omnipresent
(D) Omnipotent
(E) Omniscient

92. ATTRITION
(A) Addition
(B) Regret
(C) Attitude
(D) Abrasion
(E) Concentration

93. RETICENCE
(A) Reserve
(B) Retention
(C) Regret
(D) Brazenness
(E) Hostility

94. CHAGRIN
(A) Chin
(B) Mortification
(C) Elation
(D) Intuition
(E) Chamber

95. PLAUDIT
(A) Concentration
(B) Commendation
(C) Complaint
(D) Comparison
(E) Scholar

96. VIVA VOCE
(A) Lively
(B) In writing
(C) Belligerently
(D) Thematically
(E) Orally

97. MALFEASANCE
(A) Seasickness
(B) Criticism
(C) Cure
(D) Misconduct
(E) Poor performance

98. HAMLET
(A) Actor
(B) Benefactor
(C) Small rodent
(D) Village
(E) Introvert

99. PNEUMATIC
(A) Pertaining to air
(B) Automatic
(C) Sick
(D) Elastic
(E) Plotted

100. TEPID
(A) Enraged
(B) Equatorial
(C) Transported
(D) Lukewarm
(E) Embarrassed

ANSWER KEY

1.	B	21.	E	41.	D	61.	A	81.	A
2.	D	22.	B	42.	D	62.	B	82	C
3.	A	23.	B	43.	D	63.	B	83.	A
4.	A	24.	D	44.	E	64.	D	84.	C
5.	C	25.	D	45.	A	65.	B	85.	D
6.	D	26.	C	46.	A	66.	E	86	E
7.	E	27.	A	47.	E	67.	D	87.	B
8.	C	28.	E	48.	C	68.	C	88.	C
9.	E	29.	A	49.	A	69.	D	89.	B
10.	A	30.	B	50.	B	70.	B	90.	E
11.	B	31.	E	51.	C	71.	E	91.	C
12.	B	32.	D	52.	A	72.	C	92.	D
13.	D	33.	B	53.	E	73.	A	93.	A
14.	C	34.	D	54.	D	74.	D	94.	B
15.	E	35.	A	55.	B	75.	B	95.	B
16.	C	36.	C	56.	C	76.	A	96.	E
17.	D	37.	A	57.	E	77.	C	97.	D
18.	B	38.	A	58.	D	78.	B	98.	D
19.	C	39.	C	59.	A	79.	D	99.	A
20.	D	40.	D	60.	C	80.	A	100.	D

SYNONYMS AND ANTONYMS TESTS

100 QUESTIONS
20 MINUTES

DIRECTIONS Each of the following questions consist of a word printed in italics, followed by five words or phrases Letter A to E. choose the word or phrase which is most nearly the **same as or the opposite** of the word in italics write your choice on your answer paper.

1. AQUILINE
   (A) Watery
   (B) Hooked
   (C) Refined
   (D) Antique
   (E) Rodent like

2. ARCHAIC
   (A) Youthful
   (B) Cautions
   (C) Antiquated
   (D) Placated
   (E) Buttressed

3. ARDOR
   (A) Zeal
   (B) Paint
   (C) Proof
   (D) Group
   (E) Excitement

4. ARTIFICE
   (A) Spite
   (B) Exception
   (C) Anger
   (D) Candor
   (E) Loyalty

5. ARTISAN
   (A) Unskilled laborer
   (B) Educator
   (C) Decided
   (D) Sculptor
   (E) Discourse

6. ASCERTAIN
   (A) Amplify
   (B) Master
   (C) Discover
   (D) Retain
   (E) Explode

7. ASTEROID
   (A) Milky way
   (B) Radiance
   (C) Large planet
   (D) Rising room
   (E) Setting room

8. ASPERITY
   (A) Anguish
   (B) Absence
   (C) Innuendo
   (D) Good temper
   (E) Snake

9. ASSUAGE
   (A) Stuff
   (B) Describe
   (C) Wince
   (D) Worsen
   (E) Introduce

10. ASTUTE
    (A) Sheer
    (B) Noisy
    (C) Astral
    (D) Unusual
    (E) Foolish

11. ATROCITY
    (A) Endurance
    (B) Fortitude
    (C) Session
    (D) Heinous act
    (E) Hatred

12. ATYPICAL
    (A) Superfluous
    (B) Booming
    (C) Normal
    (D) Clashing
    (E) Lovely

13. AUDACITY
(A) Boldness
(B) Asperity
(C) Strength
(D) Stature
(E) Anchorage

14. AVARICE
(A) Anxiety
(B) Generosity
(C) Statement
(D) Invoice
(E) Power

15. BALMY
(A) Venturesome
(B) Dedicated
(C) Mild
(D) Fanatic
(E) Memorable

16. AWRY
(A) Recommended
(B) Commiserating
(C) Startled
(D) Straight
(E) Psychological

17. BANAL
(A) Philosophical
(B) Original
(C) Dramatic
(D) Heedless
(E) Discussed

18. BALEFUL
(A) Doubtful
(B) Virtual
(C) Deadly
(D) Conventional
(E) Virtuous

19. AUXILIARY
(A) Righteous
(B) Prospective
(C) Assistant
(D) Archaic
(E) Mandatory

20. BANEFUL
(A) Intellectual
(B) Thankful
(C) Decisive
(D) Nonpoisonous
(E) Remorseful

21. CLANDESTINE
(A) Abortive
(B) Secret
(C) Tangible
(D) Doomed
(E) Approved

22. COGNOMEN
(A) Family name
(B) Dwarf
(C) Suspicion
(D) Kind of railway
(E) Pseudopod

23. COMBUSTIBLE
(A) Flammable
(B) Industrious
(C) Water proof
(D) Specific
(E) Plastic

24. COMPLIANT
(A) Numerous
(B) Veracious
(C) Soft
(D) Adamant
(E) Livid

25. CILIATED
(A) Foolish
(B) Swift
(C) Early
(D) Constructed
(E) Hairy

26. CLEFT
(A) Split
(B) Waterfall
(C) Assembly
(D) Parfait
(E) Surplus

27. COHESION
(A) Independence
(B) Pedestrian
(C) Shift
(D) Pharmacy
(E) Climbing

28. COMESTIBLE
(A) Vigorous
(B) Fit to be eaten
(C) Liquid
(D) Beautiful
(E) Circumvented

29. CIRCUITOUS
(A) Direct
(B) Complete
(C) Obvious
(D) Aware
(E) Tortured

30. CLICHÉ
(A) Increase
(B) Vehicle
(C). Morale
(D) Original
(E) Pique

31. DISINGENUOUS
(A) Uncomfortable
(B) Eventual
(C) Naïve
(D) complex
(E) Enthusiastic

32. DESTITUTE
(A) Reckless
(B) Dazzling
(C) Wanton
(D) Characteristic
(E) Explanatory

33. DILATE
(A) Procrastinate
(B) Expand
(C) Conclude
(D) Participate
(E) Divert

34. DEVOUT
(A) Quiet
(B) Dual
(C) Impious
(D) Loyal
(E) Faithless

35. Diminution
(A) Expectation
(B) Context
(C) Validity
(D) Appreciation
(E) Difficulty

36. DEVOID
(A) Latent
(B) Eschewed
(C) Full of
(D) Suspecting
(E) Evident

37. DISCONSOLATE
(A) Examining
(B) Thankful
(C) Theatrical
(D) Joyous
(E) Prominent

38. DIABOLICAL
(A) Mischievous
(B) Lavish
(C) Seraphic
(D) Azure
(E) Red

39. DISHEVELED
(A) Recognized
(B) Unkempt
(C) Short
(D) Written
(E) Witty

40. DIFFIDENCE
(A) Sharpness
(B) Boldness
(C) Malcontent
(D) Dialogue
(E) Catalog

41. FINITE
(A) Bounded
(B) Established
(C) Affirmative
(D) Massive
(E) Finicky

42. FIASCO
(A) Cameo
(B) Mansion
(C) Pollution
(D) Success
(E) Gamble

43. FLAIR
(A) Conflagration
(B) Inspiration
(C) Bent
(D) Egregiousness
(E) Magnitude

44. FLAMBOYANT
(A) Old-fashioned
(B) Restrained
(C) Impulsive
(D) Cognizant
(E) Eloquent

45. FANCIFUL
(A) Imaginative
(B) Knowing
(C) Elaborate
(D) Quick
(E) Lusty

46. FECUNDITY
(A) Prophecy
(B) Futility
(C) Fruitfulness
(D) Need
(E) Dormancy

47. FELL
(A) Propitious
(B) Illiterate
(C) Catastrophic
(D) Futile
(E) Inherent

48. FLAT
(A) Motor
(B) Degree
(C) Lesion
(D) Suture
(E) Order

49. FLEDGLING
(A) Weaving
(B) Bobbing
(C) Beginning
(D) Studying
(E) Flaying

50. FACTITIOUS
(B) Magnificent
(C) Polished
(D) Puny
(E) Ridiculous

51. IMMUTABLE
(A) Silent
(B) Changeable
(C) Articulate
(D) Loyal
(E) Varied

52. INCARCERATE
(A) Inhibit
(B) Acquit
(C) Account
(D) Imprison
(E) Force

53. Importune
(A) Export
(B) Plead
(C) Exhibit
(D) Account
(E) Visit

54. INALIENABLE
(A) Inherent
(B) Repugnant
(C) Closed to immigration
(D) Full
(E) Accountable

55. IMPETUOUS
(A) Rash
(B) Inane
(C) just
(D) Flagrant
(E) Redolent

56. IMPROMPTU
(A) Prompted
(B) Appropriate
(C) Rehearsed
(D) Foolish
(E) Vast

57. IMMOLATE
(A) Debate
(B) Scour
(C) Sacrifice
(D) Sanctify
(E) Ratify

58. IMPERVIOUS
(A) Impenetrable
(B) Vulnerable
(C) Chaotic
(D) Cool
(E) Perfect

59. IMPECCABLE
(A) Unmentionable
(B) Quotable
(C) Blinding
(D) Faulty
(E) Hampering

60. HYPERCRITICAL
(A) Intolerant
(B) False
(C) Extreme
(D) Inarticulate
(E) Cautious

61. MAGNITUDE
(A) Realization
(B) Fascination
(C) Enormity
(D) Gratitude
(E) Interference

62. MANIACAL
(A) Demoniac
(B) Saturated
(C) Sane
(D) Sanitary
(E) Handcuffed

63. Loquacious
(A) Taciturn
(B) Sentimental
(C) Soporific
(D) Soothing
(E) Sedate

64. MALEFACTOR
(A) Quail
(B) Lawbreaker
(C) Beneficiary
(D) Banker
(E) Female agent

65. MELLIFLUOUS
(A) Porous
(B) Honeycombed
(C) Strong
(D) Strident
(E) Viscous

66. LITHE
(A) Stiff
(C) Facetious
(D) Insipid
(E) Vast

67. LURID
(A) Dull
(B) duplicate
(C) heavy
(D) Grotesque
(E) Intelligent

68. MALEVOLENT
(A) kindly
(B) vacuous
(C) ambivalent
(D) volatile
(E) primitive

69. MANIFEST
(A) Limited
(B) Obscure
(C) Faulty
(D) Varied
(E) Vital

70. LOATH
(A) Loose
(B) Evident
(C) Deliberate
(D) Eager
(E) Tiny

71. OSTENTATIOUS
(A) Occasional
(B) flashy
(C) intermittent
(D) Authentic
(E) Hospital

72. PALLIATE
(A) Smoke
(B) Quicken
(C) Substitute
(D) Alleviate
(E) Sadden

73. PANDEMONIUM
(A) Calm
(B) Frustration
(C) Efficiency
(D) Impishness
(E) Sophistication

74. PARIAH
(A) Village
(B) Suburb
(C) Outcast
(D) Disease
(E) benefactor

75. PAPYRUS
(A) Mountain
(B) Peninsula
(C) Paper
(D) Animal
(E) pyramid

76. REGAL
(A) Oppressive
(B) Common
(C) Major
(D) Basic
(E) Entertaining

77. REBATE
(A) Relinquish
(B) Settle
(C) Discount
(D) Cancel
(E) Elicit

78. QUANDARY
(A) Quagmire
(B) Dilemma
(C) Epigram
(D) Enemy
(E) Finish

79. REFRACTORY
(A) Articulate
(B) Sinkable
(C) Vaunted
(D) Useless
(E) Management

80. RAZE
(A) Shave
(B) Heckle
(C) Finish
(D) Tear down
(E) Write

81. QUAFF
(A) Drug
(B) Imbibe
(C) Seal
(D) Scale
(E) Joke

82. RECTIFY
(A) Remedy
(B) Avenge
(C) Create
(D) Assemble
(E) Attribute

83. RUCOUS
(A) Mellifluous
(B) Uncooked
(C) Realistic
(D) Veracious
(E) Anticipating

84. PUSILLANIMOUS
(A) Poverty-stricken
(B) Chained
(C) Posthumous
(D) Cowardly
(E) Strident

85. RECREANT
(A) Vacationing
(B) Faithfull
(C) Indifferent
(D) Obliged
(E) Reviving

86. QUIXOTIC
(A) Rapid
(B) Exotic
(C) Longing
(D) Timid
(E) Idealistic

87. SQUANDER
(A) Fortify
(B) Depart
(C) Roam
(D) Preserve
(E) Forfeit

88. SOMNOLENT
(A) Stentorian
(B) Settled
(C) Half awake
(D) Sooth
(E) Ambulatory

89. SKITTISH
(A) Tractable
(B) Inquiring
(C) Dramatic
(D) Vain
(E) Frisky

90. SPORTIVE
(A) Competing
(B) Playful
(C) Indignant
(D) Foppish
(E) Fundamental

91. VESTIGE
(A) Trek
(B) Trail
(C) Trace
(D) Trial
(E) Tract

92. VENTUROUS
(A) Timorous
(B) Confiscatory
(C) Lethal
(D) Tubercular
(E) Dorsal

93. VEHEMENT
(A) Substantial
(B) Regular
(C) Calm
(D) Cautious
(E) Sad

94. TAUTOLOGY
(A) Memory
(B) Repetition
(C) Tension
(D) Simile
(E) Lack of logic

95. STILTED
(A) Candid
(B) Pompous
(C) Modish
(D) Acute
(E) Inarticulate

96. TENDENTIOUS
(A) Biased
(B) Likely
(C) Absurd
(D) Festive
(E) Literary

97. WARRANTY
(A) Threat
(B) Guarantee
(C) Order for arrest
(D) Issue
(E) Fund