TANCET 2004 MCA QUESTION PAPER

1. In 1970, it cost $12 to purchase 100 pounds of fertilizer. In 1990 it costs $34 to purchase 100 pounds of fertilizer. The price of 100 pounds of fertilizer increased how many dollars between 1970 and 1990?

1) 1.20 2)2.20 3)3.40 4)22

2. A train 700 meter long is running at 72 km/ hour. If it crosses a tunnel in 1 minute the length of the tunnel is

1) 500 m 2) 700 m 3) 1200 m 4) 1900 m

3. A car driver's income consists of his salary and tips. His salary is $50 a week. During one week his tips were 5/4 of his salary. What fraction of his income for the week came from tips?

1) 4/9 2)1/2 3)5/9 4)5/8

4. The ratio of A's and B's age is 3 : 5 and the sum of their age is 80 years. The ratio of their age after 10 years will be

1) 1:2 2) 2:3 3) 3:4 4) 4:5

5. There are 32 students in a class, of them 20 are males. If 22 students are right handed and 3 females in the group are not right handed, how many male students are right handed?

1) 7 2) 9 3) 12 4) 13

6. If the radius of the circle is increased by 6%, then the area of the circle is increased by

1) 0.36% 2) 3.6% 3) 6% 4) 12.36%

7. If the average of 6 numbers is 4.5, what is the sum of the numbers?

1) 4.5 2) 24 3) 27 4) 30

8. The cost price of 20 articles is the same as selling price of 15 articles. The profit percentage in the transaction is

1) 25 2) 30 3) 33(1/3) 4) 50

9. The perimeter of a rectangular field is 480 m and ratio between the length and breadth is 5 : 3. The area of the field is

1) 1350 m^2 2) 13500 m^2 3) 54000 m^2 4) 5.4 km^2

10. A bag of chicken feed will feed 18 chickens for 54 days. How many days will it feed 12 chickens?

1) 36 2) 37 3) 53 4) 81

11. A man works for 5 days a week and binds 35 sets of books each week. If there are 7 books in a set, what is the number of books he binds each day?

1)1 2) 49 3) 25 4) 35

12. Three boys have marbles in the ratio 19:5:3. If the boys with the least number have 9 marbles, how many marbles does the boy with the greatest number have?

1) 27 2) 33 3) 57 4)81

13. If a light flashes every 6 seconds, how many times will it flash in 3/4 of an hour?

1) 225 2) 250 3) 360 4) 450

14. 24-carat gold is pure gold. 18-carat gold is 3/4 gold, 20-carat gold is 5/8 gold. The ratio of pure gold in 18-carat gold to pure gold in 20-carat gold is

1) 5:8 2) 9: 10 3) 15 : 24 4) 8 : 5

15. 640 acres = 1 square mile 1 acre = 4840 square yards
1 square mile = ? square yards

1) 16/121 2) 121/16 3) 3,097,600 4) 309,760

16. Point P is on line segment AB. Which of the following is always true?

1) AP = PB 2) AP > PB 3) PB > AP 4) AB > AP

17. If x < y and a = b, then

1) x + a = y + b 2) x + a < y + b 3) x + a > y + b 4) x + a = y

18. If a > b > 1, then which of the following is true?

1) b + a > 2a 2) $a^2 < ab$ 3) a – b < 0 4) $a^2 > b^2$

19. In a triangle KLM the measure of angle M > the measure of angle L. Which of the following is true?

1) KM > KL 2) KL > KM 3) KL < KM 4) KM + LM < KL

20. If r is the radius of the circle and x its circumference, then area of the circle is

1) $x^2 / 4\Pi^2$ 2) $x^2 / 4\pi$ 3) $x^2/4$ 4) πx^2

21. To represent a family budget on a circle graph, how many degrees of the circle should be used to represent an item that is 20% of the total budget?

1) 20 2) 36 3) 60 4) 72

22. What is the distance from point A (3, 4) to point B (-3,-4)?

1) 0 2) 5 3) 10 4) 13

23. Line joining point (-4,0) with point (0, 5) with point (4, 0) will form

1) a circle 2) **a** right triangle 3) a rectangle 4) an isosceles triangle

24. Point P (4, 2) is the midpoint of line OPC, where O is at origin (0, 0). The coordinates of C are

1) (2, 1) 2) (4, 8) 3) (8, 2) 4) (8, 4)

25. Angles a, b and c are in ratio 1:3:2. How many degrees are there in angle b?

1) 30 2) 50 3) 60 4) 90

26. 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 favour of the water project? Which of the following statements is most like the argument above?

1) 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
2) The new gun control law is a misguided and dangerous proposal, which has been denounced by every sportsman club and gun-owners association in the state
3) We must fight the proposed antipornography statue, for its principal sponsors have voted against every major piece of women's rights legislation introduced in the last twenty years
4) The polls show that over 60% of the concerned parents in the state favour the school bond issue; cast your vote with the concerned majority on Election Day

Questions 27 - 30:

For a motorist there are three ways of going from city A to city C. By way of a bridge the distance is 20 miles and the toll is 75 Rupees. A tunnel between the two cities is a distance of 10 miles and the toll is 100 Rupees for the vehicle and driver plus 10 Rupees for each passenger. A two-lane highway without tolls goes east for 30 miles to city B and then 20 miles in a northwest direction to city C.

27. Which of the following is the shortest route from city B to city C?

1) Directly on the toll-free highway to city 2) The bridge
3) The tunnel 4) The tunnel or the Bridge

28. The most economical way of going from city A to city B in terms of tolls and distance, is to use the

1) Tunnel 2) Bridge 3) Bridge or tunnel 4) Toll-free highway

29. Martin usually drives alone from city C to city A every working day. His firm deducts a percentage of employee pay for lateness. Which factor would most probably influence his choice of the bridge or the tunnel?

1) Whether his wife goes with him 2) Scenic interest of each route
3) Traffic conditions on the road, bridge and the tunnel
4) Saving of 25 Rupees in tolls

30. In choosing between the use of the bridge and the tunnel, the chief factors would be

I. traffic and road conditions
II. number of passengers in the car
III. location of one's home In the center or outskirts of one of the cities
IV. Desire to save 25 Rupees

1) I only 2) II only 3) II and III only 4) I and II only

Questions 31 -36:

The letters A, B, C, D, E, F and G, not necessarily in that order, stand for seven consecutive integers from 1 to 10.

D is 3 less than A
B is the middle term
F is as much less than B as C is greater than D
G is greater than F

31. The fifth integer is

1) A 2) C 3) D 4) E

32. A is as much greater than F as which integer is less than G

1) A 2) B 3) C 4) D

33. If A = 7, the sum of E and G is

1) 8 2) 10 3) 12 4) 14

34. A - F = ?

1) 1 2) 2 3) 3 4) 4 .

35. An integer T is as much greater than C as C is greater than E. T can be written as A + E. What is D?

1) 2 2) 3 3) 4 4) 5

36. The greatest possible value of C is how much greater than the smallest possible value of D?

1) 2 2) 3 3) 4 4) 5

Questions 37 - 40:

1) A causes B or C, but not both
2) F occurs only if B occurs
3) D occurs if B or C occurs
4) E occurs only if C occurs
5) J occurs only if E or F occurs
6) D causes G or H or both
7) H occurs if E occurs
8) G occurs if F occurs

37. If A occurs, which may occur?

I. F and G
II. E and H

III. D

1) I only 2) II only
3) III only 4) I and III or II and III, but not both

38. If B occurs, which must occur?

1) F and G 2) D and G 3) D 4) G and H

39. If J occurs, which must have occurred?

1) E 2) Both E and F 3) Either B or C 4) G

40. Which may occur as a result of a cause not mentioned?

I. D **II. A** **III. F**

1) I only 2) II only 3) I and II only 4) II and III only

Questions 41 – 44:

Eight varsity baseball players (G, H, J, K, L, M, N, O) are to be honoured at a special ceremony. Three of these players (H, M and O) are also varsity football players. Two of them (K and N) are also basketball players on the varsity team. In arranging the seats it was decided that no athlete in two sports should be seated next to another two-sport athlete.

41. Which of the following combination is possible in order to have the arrangement of seat assignment as planned?

1) H G K J 2) H K J L 3) J K M N 4) J L H K

42. Which of the following cannot sit next to M?

1) G 2) J 3) G and J 4) K

43. Before all athletes are seated there are two vacant seats on either side of N. Which two athletes may occupy these seats?

1) G and K 2) G and L 3) J and H 4) L and O

44. To have the proper seating arrangement, K should sit between

1) G and H 2) J and M 3) L and N 4) J and L

Questions 45 - 50:

The organizer of Local 58 of the hospital workers is forming a five-person team to leaflet a nearby hospital. The team must contain two persons to distribute leaflets, one speaker to address the workers who stop and a two-person defence squad. A, B and C are possible leaf letters; C, D and E are possible speakers; F, G and H are possible members of the defence guard. A and C prefers to work with each other on the same team. E prefers to work only if F works.

45. Which is a possible team if all preference are respected?

1) A,B,C,D,F 2) A,C,D,E,F 3) A, B, C, *F*, G 4) A, C, E, G, **H**

46. If A is chosen as a member of the team and all preferences are respected, which must be true?

1) B must be a leafletter 2) C must be a ieafletter
3) F must go 4) Any of the three defence personnel may go

47. Which choice of personnel is possible if all preferences are respected?

1) A and B as leafletters, C as speaker 2) B and C as leafletter
3) A and C as leafletter, F and H on defence 4) G and H on defence

48. If A and B are leafletters and all preferences are respected, which is true?

I. C is the speaker **II. F is on defence**
III. Either F or G is on defence

1) I only 2) II only 3) III only 4) I and III only

49. How many different possible teams can the organizer assemble, if all preferences are respected?

1)5 2)8 3) 9 4) 13

50. Which person can be part of the smallest number of different possible teams, if

everyone's preferences are respected?

1) A 2) B 3) C 4) E

51. One byte is equivalent to

1) 16 bits 2) 4 bits 3) 8 bits 4) 32 bits

52. Which gate is a single Integrated circuit?

1) Gate 2) Mother Board 3) Chip 4) CPU

53. Compilers and Interpreters are themselves

1) High level language 2) Codes 3) Programs 4) Mnemonics

54. Conversion of an octal number 125_S to its decimal number is

1) 90_{10} 2) 85_{10} 3) 87_{10} 4) 99_{10}

55. The binary number 100110010 is equal to .....hexadecimal numbers

1) 22 2) 37 3) 41 4) 132

56. A computer system having 64K memory will have Its last address as

1) 65536 2) 64000 3) 65535 4) 65530

57. The logical bitwise operator is

1) bitwise AND 2) bitwise XOR 3) bitwise OR 4) all of the above

58. A variable that holds the memory address of another object is called an

1) integer 2) pointer 3) constant 4) memory variable

59. A subscript of an array can be

1) any +ve or -ve value 2) a -ve integer 3) +ve value 4) a zero

60. A union consists of a number of elements that

1) occupy the same space in memory 2) must be structures
3) are grouped next to each other in memory 4) all of the above

61. When a computer is first turned on or restarted, a special type of absolute loader, called a.....is executed

1) loader 2) linker 3) bootstrap loader 4) none of the above

62. In an absolute loading scheme, which loader function is accomplished by assembler

1) Reallocation 2) Allocation 3) Linking 4) Loading

63. The action of parsing the source program into the proper synthetic classes is known as

1) syntax analysis 2) lexical analysis
3) interpretation analysis 4) general syntax analysis

64. An algorithm is best described as

1) A computer language 2) A step by step procedure for solving a problem
3) A branch of mathematics 4) All of the above

65. Which of the following might be used to convert high level language Instructions into machine language?

1) System software 2) Application software
3) An operating environment 4) An interpreter

66. A system program that sets up an executable program in main memory ready for execution is?

1) Assembler 2) Linker 3) Loader 4) Compiler

67. A compiler is

1) A program that places programs into memory and prepare them from execution
2) A program that automate the translation of assembly language into machine language
3) Program that accepts a program written in a high level language and produces an object program
4) A program that appears to execute a source program as if it were machine language

68. Process is

1) Program in High level languages kept on disk
2) Contents of main memory
3) A program is execution
4) A Job in secondary memory

69. **C is**

1) An assembly language
2) A third generation high-level language
3) A machine language
4) All of the above

70. Operating system

1) Links a program with the subroutines it references
2) Provides a layered, user friendly interface
3) Enables the programmer to draw a flow chart
4) All of the above

71. Which of the following is a serious problem of file management systems?

1) Difficult to update
2) Lack of data independence
3) Data redundancy and program dependency
4) All of the above

72. A data dictionary does not provide information about

1) Where data is located
2) the size of the disk storage device
3) Who owns or is responsible for the data
4) How the data is used

73. The number of layers in TCP/IP model and OSI reference model is

1) 4,7
2) 5,7
3) 5, 6
4) 6, 7

74. Which of the following file transfer protocols use TCP and establishes two virtual circuits between the local and remote server?

1) FTP
2) TFTP
3) TELNET
4) NFS

75.....is need to build dynamic web documents

1) HTML
2) CGI
3) Java
4) All of the above

76. A device that converts digital signals to analog signals is?

1) A packet
2) A modem
3) Both (1) and (2)
4) A block

77. Which of the following is an advantage to using fibre optics data transmission?

1) Resistance to data theft
2) Fast data transmission rate
3) Low noise level
4) Few transmission errors

78. A Protocol is a set of rules governing a time sequence of events that must take place?

1) Between peers
2) Between modems
3) Between an interface
4) Across an interface

79. A network which is used for sharing data, software and hardware among several users owning microcomputers is called

1) WAN
2) MAN
3) LAN
4) VAN

80. Web pages are written using

1) HTTP
2) FTP
3) URL
4) HTML

81. Ten minutes after a plane leaves the airport, it is reported that the plane is 40 miles away. What is the average speed of the plane, in miles per hour?

1) 66
2) 240
3) 400
4) 600

82. An automobile passes city X at 9.55 A.M. and city Y at 10.15 A.M. city x is 30 miles from city Y, what is the average rate of the automobiles in miles per hour?

1) 10
2) 30
3) 90
4) 120

83. Two cars start towards each other from points 400 miles apart. One car travels of 40 miles an hour and the other travels at 35 miles an hour. How far apart, in miles, will the two cars be after 4 hours of continuous travelling?

1)20
2)40
3)75
4)100

84. How long would a car travelling at 30 miles per hour take to cover a distance of 44 feet? (1 mile = 5280 feet)

1) 1 second 2) 2.64 second 3) 1 minute 4) 7.7 minutes

85. What is the maximum number of glass tumblers each with a circumference of 4π inches, can be placed rectangularly on a table 48"x 32"?

1) 36 2) 48 3) 92 4) 96

86. The numerator and denominator of a fraction are in the ratio 2:3. If 6 is subtracted from the numerator the result will be a fraction that has a value 2/3 of the original fraction. The numerator of the original fraction is?

1) 4 2) 6 3) 9 4) 18

87. A train covers the distance between two cities in h hours arriving 2 hours late. What rate would permit the train to arrive on schedule?

1) h-2 2) d/h - 2 3) d/(h-2) 4) dh-2

88. A box is made in the form of a cube. If a second cubical box has inside dimensions three times those of the first box, how many times as much does the second box contain?

1) 27 2) 3 3) 6 4) 9

89. Nancy would like to complete all her homework before 10 P.M. in order to watch an important television program. She has 40 - minute assignments in each of the five prepared subjects. What is the latest time at which she can start and still complete her homework in time for the program?

1) 6.30 RM. 2) 6.40 PM. 3) 7.10 RM. 4) 7.20 RM.

90. A rectangle L inches long and w inches wide is made 3 inches longer. The area is increased by

1) 3w 2) 31 3) 3wl 4) 3 (1 + w)

91. City x is 200 miles east of city y and city z is 150 miles directly north of city y. What is the shortest distance between x and z?

1) 507 2) 175 3) 200 4) 250

92. When 6 gallons of gasoline are put into a car the indicator goes from 1/4 to 5/8. The total capacity of the gasoline tank (in gallons is)?

1) 12 2) 14 3) 30 4)16

93. One half of the student body at school study French and one third of others study Tamil. The remaining 300 do not study Tamil or French. How many students are there in this school?

1) 360 2) 550 3) 900 4) 1350

94. A sports jacket marked $48 Is offered at a discount of 25% during storewide sale. At this reduced price the dealer makes a profit of 20% of the cost. The cost to the dealer is

1) $29 2) $30 3) $32 4) $40

95. A man covers d miles In hours. At that rate how long (in hours) will it take him to cover m miles?

1) dmt 2) md/t 3)mt/d 4) dt/m

96. Mr. John can mow his lawn in x hours. After 2 hours it begins to rain. What part of the lawn is left un mowed?

1) (x-2)/x 2) (2-x)/x 3) x/2 4) (x - 2)/2

97. Which of the following has the greatest value?

1) 0.3 2) $0.3^{0.5}$ 3) 2/5 4) 1/3

98. One wheel rotates once every 7 minutes, and another rotates once every 5 minutes. How often will both begin to rotate at the same time?

1) Every 6 min. 2) Every 12 min. 3) Every 17.5 min. 4) Every 35 min.

99. If $9x - 3y = 12$ and $3x - 5y = 7$, then $6x - 2y$ equals?

1) -5 2) 8 3) 4 4) 7

100. R and Tare points on straight line PQ on which PR = RT = TQ. What percent of PT is PQ?

1) 1 ½ % 2) 50% 3) 66 ½ % 4) 150%