MODEL QUESTION PAPER – 3

1. Flowers in a basket double after every minute. In an hour, the basket is full. The basket would have been half full after.....minutes.

(a) 30 (b) 45 (c) 58 (d) 59

2. The average of nine numbers 6, 2-x, 8, 3x-2, 5, 9, 2, 7, 18 is 11. Then x equals:

(a) 20 (b) 5.5 (c) 13 (d) 22

3. If log Y + 3 log x = 2, then Y equals:

(a) 2/3x (b) $2/x^3$ (c) $100/x^3$ (d) $x^3 - 100$

4. If $\log_4 (x^2 + x) - \log_4 (x + 1) = 2$, x equals:

(a) 2 (b) 4 (c) 5 (d) 16

5. When simplified $\frac{(625)^{6.25} . (25)^{2.60}}{(625)^{6.75} .(5)^{1.20}}$ equals:

(a) 625 (b) 6.25 (c) 25 (d) 0.25

6. If HCF and LCM of 77, 99 and x are respectively 11 and 3,465 then x is equal to:

(a) 33 (b) 44 (c) 55 (d) 66

7. In order to compute 0.15% of a number, the number must be multiplied by:

(a) 0.0015 (b) 0.015 (c) 0.15 (d) 1.5

8. p is 95% of q. What percentage of p is q?

(a) 95% (b) 105% (c) 105.3% (d) 195%

9. The sum of two numbers is 10; their product is 20. The sum of their reciprocals is:

(a) 2 (b) ½ (c) 1/10 (d) 1/30

10. If $4^x - 4^{x-1} = 24$, then $(2x)^x$ equals:

(a) 1 (b) 125 (c) √5 (d) 25√5

11. $[(2^2)^2]^{-1}$, when simplified, equals:

(a) 16 (b) -16 (c) - 0.0625 (d) 0.0625

12. If a Solid block is cut by horizontal plane, the cross-section is a circle. And if it is cut by a vertical plane, the cross-section is a square. That block is a:

(a) Sphere (b) Cone (c) Cylinder (d) None of the above

13. A dealer buys a lot of 50 chairs for Rs 5,000 but 20 of them are damaged. He decides to sell each damaged one at three-fourths the price of the normal one. To make a profit of 35% on the whole, the selling price of a chair should be:

(a) Rs 135 (b) Rs 150 (c) Rs 160 (d) Rs 175

14. A sum of money at compound interest, compounded annually, amounts in 2 years to Rs 2,704 and in 3 years to Rs 2,812.16. The rate of interest is:

(a) 8% (b) 6% (c) 4% (d) 5%

15. If a sum of money double itself in 16 years at a certain rate of interest, it will become ..... times itself in 8 years at die same rate.

(a) 1(1/2) (b) 1(1/4) (c) 1(1/3) (d) 1(1/5)

16. A clerk borrowed a sum of money at compound interest from a credit society. He had to pay it back in two equal yearly instalments of Rs 4,410 each. If the rate of interest was 5% per annum, the money borrowed by him was:

(a) Rs 8,820 (b) Rs 8,400 (c) Rs 8,000 (d) Rs 8,200

17. If Sunil Kumar travels at the rate of 3 kmph, he reaches his office 15 minutes late. If he travels at the rate of 4 kmph, he reaches his office 15 minutes earlier. The distance of his office is ..... km,

(a) 3.5 (b) 7 (c) 2 (d) 6

18. A sample of 50 litres of glycerine is found to be adulterated to the extent of 20%. How much pure glycerine should be added to bring the percentage of impurity down to 5%?

(a) 60 litres (b) 40 litres (c) 150 litres (d) 190 litres

19. A cistern without lid containing 8,000 litres of water measures externally 3m 3dm ×2m 6dm × lm 1 dm, the sides being 5 cm thick. The thickness of the bottom of the cistern is:

(a) 2.5 cm (b) 1 dm (c) 1 cm (d) 5 cm

20. Raman Kumar has a garden 30 m long and 20 m broad. He decides to increase the length by 6 m. By how many metres should he increase the breath so that the garden remains similar in shape?

(a) 4 m (b) 6 m (c) 22 m (d) 24 m

21. The area of a right triangle is S sq cm and one of the sides containing the right angle is l cm. The altitude on the hypotenuse is:

(a) 25/t cm (b) $(S^2 - t^2)$ cm

(c) $\sqrt{[t^2 + (4S^2)/t^2]}$ cm (d) $2St\sqrt{[t^4 + (4S^2)/t]}$ cm

22. The side of a square is 2 dm. Semi-circles are constructed on each side of the square. The area of the whole figure in dm^2 is:

(a) $4 + 2\pi$ (b) $4 + 4\pi$ (c) 4π (d) 8π

23. In a chess board, eight rooks are to be placed such that no two rooks are in the same row or in the same column. In how many ways the eight rooks can be placed in the chess board?

(a) 64 (b) 5040 (c) 40320 (d) 16777216

24. A and B are two single digit number. If A73B92 is divisible by 99, then

(a) A = 9 and B = 6 (b) A = 6 and B = 9

(c) A = 5 and B = 1 (d) A = 4 and B = 2

25. There are two outlet taps, A and B in a tank. When both taps are opened, the tank with full of water is drained in 45 minutes. If the tap A is opened and the tap B is closed, the tank will be drained in 1 hour. If the tap B is opened and the tap A is closed, how long will it take to drain the tank?

(a) 2 hrs. (b) 3 hrs. (c) 2 hrs. 30 min. (d) 4 hrs.

26. There are 100 students in a class and they were given two tests. In the first test, only 37 passed whereas in the second test 49 passed. At least how many students failed in both the tests?

(a) 12 (b) 14 (c) 43 (d) 51

27. Which of the following statements are true?

A) If a perfect square is divided by 3, the remainder is always 0 or 1

B) If a perfect square is divided by 7, the remainder can never be 3 or 5

C) If a perfect cube is divided by 5, the remainder can never be 2 or 3

D) If a perfect cube is divided by 9, the remainder is always 1 or 8

(a) A and B only (b) A and C only (c) B and D only (d) C and D only

28. Which of the following three measures cannot be sides if a triangle?

(a) 2 cm, 3 cm, 4 cm (b) 3 cm, 4 cm, 5 cm

(c) 4 cm, 8 cm, 5 cm (d) 7 cm, 11cm, 15 cm

29. How many times 7 appear when the integers between 10 and 100 are written?

(a) 17 (b) 18 (c) 19 (d) 20

30. If f(x) denotes the greatest integer less than or equal to the cube root of 3x, then the sum of the series $\sum f(n)$ where n varies from 1 to 10 is

(a) 13 (b) 19 (c) 20 (d) 39

Directions for Questions 31 to 33:

In the following questions each questions each letter has rupee value following some uniform pattern. Find the cost of the given items. { Hints L = Rs 24, R = Rs.36, W = Rs.46}

31. If SOFA is valued at Rs. 82, find the cost of CAMERA.
(a) Rs. 84 (b) Rs. 72 (c) Rs. 82 (d) Rs. 92
32. If MOBILE costs Rs. 110, what would a FLOPPY costs?
(a) Rs. 168 (b) Rs. 178 (c) Rs. 152 (d) 208
33. If CLOCK costs Rs.86, what would a TREE cost?
(a) Rs. 92 (b) Rs. 96 (c) 106 (d) Rs. 84

Directions for questions 34 to 37:
If in a certain language PARAMOUNT is coded as 921026812711 and DRIVE is coded as 3105124 how would the following words coded in that language?

34. DIVINE
(a) 5312574 (b) 3513574 (c) 5743513 (d) 1335574
35. VNARMED
(a) 127410645 (b) 97210654 (c) 89729642 (d) 127210643
36. VIDEO
(a) 135348 (b) 98542 (c) 54389 (d) 1352884
37. ARRIVE
(a) 2885124 (b) 210105134 (c) 3665134 (d) 2771312

Directions for questions 38 to 41:
In the following questions one term is missing from the series, Tick the option that you think fits in the blank space to complete the series.

38. AGM, BHN, (----), DSP, EKQ, FLR
(a) OIC (b) CIO (c) IOU (d) LXR
39. BL4, CM9, DN16, (---), FP36, GQ49
(a) DF64 (b) EO49 (c) EO25 (d) OE52
40. DEBc, JKHi, (---), VWTu,
(a) QPOn (b) XWUv (c) PQNo (d) UTRn
41. ABBA, EFFE, IJJI, (---), QRRQ, UVVU
(a) MNMN (b) XNNM (c) NMNM (d) KLLK

Directions for Questions 46 to 53:
A basket contains certain number of apples. Anita takes 1 less than 50% of the apples. Then Banu takes 1 less than 50% of the left out. Then Chitra takes 1 less than 50% of the balance. Finally only apples are left out in the basket.

46. How many apples were there in the beginning in the basket?
a) 10 b) 16 c) 18 d) 20
47. How many apples that Banu has taken?
a) 4 b) 3 c) 2 d) 1
48. The next term in the sequence 1, 4, 10, 20, 35, 56, 84, 120, ... is
a) 165 b) 175 c) 180 d) 192
49. Among the four groups of letters, three are alike in some way while one is different. Find the one which is different
a) CSUF b) LBDO c) PGJS d) UMOX
50. If SHIP is written as PEFM, then BOAT may written as
a) DQCW b) ERDX c) YLXQ d) ZMYR

51. Find the odd man out

a) TESRIS b) HATFER c) HOTREM d) LOVINI

52. Insert the missing number 243 (250) 368 317 ( ) 438

a) 242 b) 323 c) 324 d) 342

53. In the following list, one of the words is my pass word. If 1 were to tell you any letter of my pass word, then you would be able to tell me the number of vowels in my pass word. Which is my pass word?

a) CASH b) SNOW c) TIME d) IDEA

Directions for questions 42 to 45

In each of the following questions, a statement is given, followed by two conclusions. Give answer

(a) if only conclusion I follows
(b) if only conclusion II follows
(c) if either I and II follows
(d) id neither I and II follows
(e) if both I and II follow

42. **Statement** : Morning walks are good for health.
Conclusion : I. All healthy people go for morning walks.

II. Evening walks are harmful

43. **Statement** : Company X has marketed the product. Go ahead, purchase it, if price and quality are your considerations.
Conclusion : I. The product must be good in quality.
II. The price of the product must be reasonable

44. **Statement** : The best way to escape from a problem is to slove it.
Conclusion : I. Your life will be dull if you don't face a problem
II. To escape from problems, you should always have some solutions with you

45. **Statement** : A neurotic is a non-stupid person who behaves stupidly
Conclusion : I. Neuroticism and stupidity go hand in hand.
II. Normal persons behave intelligently.

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For Questions 54 and 58:

54. In the above figure, how many squares are there?

a) 16 b) 20 c) 24 d) 28

55. In the above figure, how many triangles are there?

a) 72 b) 84 c) 96 d) 100

56. Find the missing figure: 3, 7, 17, 39, 85,?

a) 179 b) 189 c) 147 d) 255

57. Find the missing pair of letters: IR LO ? RI UF XC

a) OL b) ON c) NO d) RO

58. Which of the figures 1, 2, 3, 4 given in the answers will logically fit into the next figure in the following sequence?

59. A man pointing to a photograph says, "The lady in the photograph is my nephew's maternal grandmother." How is the lady in the photograph related to the man's sister who has no other sister?

a) cousin b) sister-in-law c) mother d) mother-in-law

60. Pointing to a lady, a man said, "The son of her only brother is the brother of my wife." How is the lady related to the man?

a) mother's sister b) grandmother c) mother-in-law
d) sister of father-in-law e) Maternal anut

61. The first mechanical computer designed by Charles Babbage was called

a) Abacus b) Analytical Engine c) Calculator d) Processor

62. If 4A9C in hexadecimal system is x in octal system then x is

a) 43254 b) 45234 c) 11247 d) 74211

63. The parity bit is added for the purpose of

a) coding b) indexing c) error-detection d) controlling

64. ROM is composed of

a) floppy disks b) magnetic cores c) microprocessors d) photoelectric cells

65. A micro computer has primary memory of 640K. What is the exact number of bytes contained in this memory?

a) 640,000 b) 655,360 c) 65,536 d) 64×2^{16}

66. Which of the following is the most appropriate unit for measuring the storage capacity of a hard disk?

a) byte b) megabyte c) bit d) terabyte

67. Find the odd man out

a) coaxial cable b) optical fibre c) twisted pair wire d) microwaves

68. Which one of the following when added can reduce the processing time of a computer?

a) a buffer b) a converter c) a co-processor d) an EPROM

69. Which of the following hardware components is the most volatile?

a) ROM b) RAM c) PROM d) EPROM

70. What name is given to the collection of facts, items of information or data which are related in some way?

a) information tree b) information provider c) directory information d) database

71. Who is considered to be the father of Artificial Intelligence?

a) George Boole b) John McCarthy c) Allen Newell d) Alan Turing

72. Which of the following memories is an optical memory?

a) Floppy Disk b) Core Memories c) Bubble Memories d) CD-ROM

73. The only things moving around inside a computer are

a) bytes b) electrons c) l's and 0's d) words

74. Find the odd man out

a) altavista b) google c) java d) lycos

75. What is me name of the network topology in which there are bi-directional links between each possible node?

a) Ring b) Star c) Tree d) Mesh

76. Which of the following might prevent a program from being modified in the future?

a) logic errors b) lack of program documentation

c) syntax errors d) pseudocode

77. What will be the value returned by calc when it is invoked with n = 10?

a) 10 b)45 c)55 d)90

78. The temperature of 32° C is equal to

a) 0°F b) 89.6° F c) 100° F d) 115.2° F

79. A gallon is approximately equal to

a) 3.5 litres b) 4.0 litres c) 4.55 litres d) 6.25 litres

80. DNS refers to

a) Data Number Sequence b) Domain Name System

c) Disk Numbering System d) Digital Network Service

81. Each high level-language statement is known as

a) assembly language b) machine language

c) programming language d) none of these

82. A ------- is a combinational circuit that converts binary information firm n input lines to a maximum 2n unique output lines

a) decoder b) encoder c) multiplexer d) none of these

83. Magnetic tape is a ---------- storage device

a) sequential access b) random access c) direct access d) none of these

84. The speed represented with which data can be transferred from the disk to CPU is

a) seek time b) rotational delay c) transfer rate d) none of these

85. The register which holds the address of the location when an instruction is read out or written in the memory is

a) PC b) MAR c) MBR d) none of these

86. --------- contain a micro processor and internal storage

a) Dumb terminals b) Smart terminal c) Intelligent terminal d) none of these

87. APL is

a) a programming language b) software package
c) Operating system d) none of these

88. A compiler or an interpreter is itself a program written in some language called
a) Assembly language b) Machine language
c) Host language d) none of these

89. A long and complex program is split into a number of smaller programs known as
a) modules b) structured programming
c) top-down design d) bottom-up-design

90. Managing the flow of data and instructions between the I/O units and the primary memory is
a) Job management b) I/O management c) Data management d) none of these

91. ------- provides graphical interface to users
a) MS DOS b) UNIX c) WINDOWS d) none of these

92. The base number in a number system is
a) Radix b) Track c) Bottom d) none of these

93. Which is NOT considered an advantage of an EDP system?
a) low equipment cost b) accuracy and realiability
c) speed d) increased storage capacity

94. Which number system do we use in our day to day activities
a) octal b) analog c) binary d) decimal

95. Which is the “mega flop”?
a) high capacity data transmission b) large storage device
c) one million flooting point operations per second
d) measurement of primary storage capacity

96. ASCII data representation is similar to
a) handwriting b) morse code c) scientific notation d) letters of the alphabet

97. Eight consecutive bits are called a
a) BUS b) byte c) logic gate d) binary digit

98. ISA, EISA, and MICA are terms to describe
a) parallel processors b) tape drives c) types of buses d) serial printer

99. UNIX is a
a) software b) hardware c) A printer d) CPU

100. LET is a(n) ---------- statement
a) assignment b) remark c) conditional d) unconditional