

1. Pictorial representation of an algorithm is known as:  
A) Venn diagram                      B) Histogram  
C) ER diagram                         D) Flow chart
  
2. C++ programming language follows:  
A) Procedural programming  
B) Object oriented programming  
C) Both (A) & (B)  
D) Neither A nor B
  
3. Which of the following is used to convert high level language to machine level language?  
A) Compiler                              B) Macros  
C) Operating System                    D) Loader
  
4. What Is the full form of the tem FLOPS Connected with Super Computer:  
A) Floating-point Operations Per Second  
B) Frames Loading Operation Per Second  
C) File Loading Operations Per Second  
D) File Locking Operations Per Second
  
5. Main feature of Operating System is:  
A) Memory management                B) Processor management  
C) Device management                 D) All of the above
  
6. Cache memory is used to:  
A) Reduce memory access time  
B) Increase storage  
C) To implement pipelining  
D) Increase memory access time
  
7. Size of virtual memory depends on:  
A) Secondary memory                  B) Primary memory  
C) Cache memory                        D) Both (A) & (B)
  
8. Main memory is also known as:  
A) ROM                                    B) RAM                                    C) EEPROM                                D) PROM
  
9. 1 MB is equal to:  
A) 1048576 bytes                        B) 1047756 bytes  
C) 2048576 bytes                        D) 2047756 bytes

10. 1 Petabyte is:  
 A) 1024 Megabytes                      B) 2048 Terabytes  
 C) 1024 Gigabytes                      D) 1024 Terabytes
11. Address of the next instruction to be executed from memory is stored in:  
 A) Data register                      B) Program counter  
 C) Accumulator                      D) None of these
12. Which of the following is/are examples of relational database?  
 A) Oracle              B) Ingress              C) MySQL              D) All of these
13. DQL stands for:  
 A) Data Question Language    B) Data Query Language  
 C) Daily Query Language    D) Data Quoted Language
14. Which of the following is a Data Manipulation Language?  
 A) CREATE    B) SELECT    C) INSERT    D) GRANT
15. Static RAM is:  
 A) Volatile                      B) Quick access time  
 C) High cost                      D) All of the above
16. The output of a NOR Gate is 1 when:  
 A) All the Inputs are 1              B) Any one of the Input is 1  
 C) All inputs are zero              D) Any one of the input is 0
17. When an interrupt occurs:  
 A) Flag register pushed on to the stack  
 B) Return address is pushed on to the stack  
 C) Both (A) & (B)  
 D) Neither A nor B
18. Programmable Interrupt Controller is:  
 A) 8255              B) 8259              C) 8279              D) 8051
19. What is the decimal value of 1011.11?  
 A) 10.92              B) 11.75              C) 12.67              D) 13.87
20. Binary equivalent of decimal 23.6 is:  
 A) 10111.10011                      B) 10110.10001  
 C) 10101.11001                      D) 10110.10101
21. Bootstrap program to start the computer is stored in:  
 A) RAM              B) ROM              C) CD-ROM              D) All of these

22. Quality of a printer is analysed by:  
 A) Words per inch                      B) Dot per inch  
 C) Character per inch                  D) None of these
23. Principle of locality of reference is associated with:  
 A) Virtual memory                      B) ROM  
 C) RAM                                      D) Cache Memory
24. In computer, bus carries information between:  
 A) ROM and RAM  
 B) Microprocessor and I/O  
 C) Microprocessor, Memory and I/O  
 D) RAM and Microprocessor
25. Data from tape memory is accessed using:  
 A) Parallel            B) Serial            C) Sequential    D) Indirect
26. Working principle of digital computer is based on:  
 A) Von Neumann's Principle    B) Adams law  
 C) De Morgan's Principle        D) Kirchhoff's Law
27. DMA stands for:  
 A) Direct Method Access        B) Direct Module Access  
 C) Direct Memory Access        D) Day Memory Access
28. Snow Leopard is connected with  
 A) Windows            B) Intel            C) Android        D) Apple Mac
29. Convert hexadecimal 9AF to binary:  
 A) 1001 1000 1110                  B) 1001 1010 1111  
 C) 1110 1110 1101                  D) 0111 1100 1100
30. Convert 1000 1100 to hexadecimal:  
 A) 8C                      B) 9C                      C) 8A                      D) 9B
31. Which of the following is sufficient to derive a Boolean Expression?  
 A) XOR                      B) AND                      C) {OR, AND}    D) None of these
32. If function  $f(A, B, C) = \Sigma(3,4,6,7)$  is implemented using SOP form, the resultant Boolean function is:  
 A)  $BC+AC$             B)  $BC+AB$             C)  $CB+CA$             D) None of these

33. If function  $f(A, B, C, D) = \Sigma(0, 1, 2, 5, 8, 9, 10)$  is implemented using POS form, the resultant Boolean function is:  
 A)  $(B+D).(C+D).(A+B)$       B)  $(B+A).(D+B).(B+C)$   
 C)  $(A+C).(B+D).(A+B)$       D) None of these
34. Which of the following represents Idempotent Law?  
 A) A.  $A=A$       B)  $A+A=A$   
 C) Both A & B      D)  $A.0=0$
35. Computer has more than one processor is called:  
 A) Multiprocessor      B) Multitasking  
 C) Multithreaded      D) Multiclad
36. Synchronous DRAM has a built-in refresh rate of:  
 A) 56 milliseconds      B) 64 milliseconds  
 C) 65 milliseconds      D) 46 milliseconds
37. Physical memory is divided into fixed size block called:  
 A) Pages      B) Segments      C) Frames      D) Blocks
38. Address generated by CPU consists of:  
 A) Page number and offset      B) Frame number and offset  
 C) Page bit and frame bit      D) Page number only
39. Database can store:  
 A) Image      B) Video      C) Text      D) All of these
40. Multivalued dependency is handled in:  
 A) 1NF      B) 2NF      C) 3NF      D) 4NF
41. Which of the following key is used to identify all the tuples in a relationship?  
 A) Surrogate key      B) Primary key  
 C) Foreign Key      D) All of the above.
42. Non maskable interrupt is known as:  
 A) TRAP      B) INT 65      C) INT 75      D) INT 16
43. FPGA stands for:  
 A) Fast Peripheral Gate Array  
 B) Field Programmable Gate Array  
 C) Fast Programmable Gate Array  
 D) Field Peripheral Gate Array

44. Real number in C language is represented as:  
 A) Double      B) Float      C) Long int      D) Char
45. Error in computer data is known as:  
 A) Trap      B) Bug      C) Tape      D) Chip
46. Programs written to perform a specific task is known as:  
 A) System software      B) Assembler  
 C) Application software      D) Loader
47. Data about data is known as:  
 A) Mega data      B) Meta data      C) Schema      D) Database
48. Row in a database is termed as:  
 A) Tuple      B) Entity      C) Relationship      D) Text
49. Partial functional dependency is eliminated in:  
 A) 1NF      B) 2NF      C) 3NF      D) BCNF
50. Entity Relationship modelling uses:  
 A) Top-down approach      B) Bottom-up approach  
 C) Tree structure      D) Both (A) & (B)
51. If  $\operatorname{cosec} \alpha + \cot \alpha = a$ , then  $\cos \alpha =$   
 A)  $\frac{a^2-1}{a^2+1}$       B)  $\frac{a^2+1}{a^2-1}$       C)  $\frac{1-a^2}{a^2+1}$       D)  $\frac{a-1}{a^2+1}$
52. If  $\cos \theta + \sqrt{3} \sin \theta = 2$ , then  $\theta =$   
 A)  $\frac{\pi}{6}$       B)  $\frac{\pi}{3}$       C)  $\frac{2\pi}{3}$       D)  $\frac{\pi}{2}$
53. The distance between the lines  $3x + 4y = 9$  and  $6x + 8y = 15$  is:  
 A) 6      B)  $\frac{6}{5}$       C)  $\frac{3}{10}$       D) 1
54. If  $a^x = b$ ,  $b^y = c$ ,  $c^z = a$  then the value of  $xyz$  is:  
 A) 1      B) 0      C)  $abc$       D) 2
55. If  $\log_{16} x + \log_4 x + \log_2 x = 14$ , then  $x =$   
 A) 64      B) 48      C) 16      D) None of these

56.  $\sqrt{49 + 20\sqrt{6}} =$   
 A)  $7 + \sqrt{30}$     B)  $5 + 2\sqrt{6}$     C)  $49 - 20\sqrt{6}$     D) 10
57. If the roots of the equation  $ax^2 + bx + c = 0$  are real and of the form  $\frac{\alpha}{\alpha-1}$  and  $\frac{\alpha+1}{\alpha}$  then the value of  $(a + b + c)^2 =$   
 A)  $b^2 - 4ac$     B)  $b^2 + 4ac$     C)  $b^2 - 2ac$     D) 0
58. If the sum of  $n$  terms of two arithmetic series are in the ratio  $(7n + 1) : (4n + 27)$ , then their 11<sup>th</sup> term are in the ratio:  
 A) 3 : 4    B) 4 : 3    C) 7 : 4    D) 1 : 1
59. The coefficient of  $x^6$  in the expansion of  $(1 - x)^{-2}$  is:  
 A) 6    B) 7    C) 0    D) 1
60. From a group of 7 women and 6 men, 5 persons are to be selected to form a committee so that at least 3 women are there in the committee. In how many ways can it be done?  
 A) 525    B) 700    C) 756    D) 735
61. If  $9P_5 + 5 \times 9P_4 = 10P_r$  then  $r =$   
 A) 5    B) 4    C) 10    D) 9
62. Let A and B be any two events. Probability of happening of at least one of the two events is 0.7 and their simultaneous happening is 0.3. then  $P(A) + P(B) =$   
 A) 1    B) 0.21    C) 0.1    D) 0.4
63. The arithmetic mean of 15, 18, 10, 22 and  $x$  is 20. Then the value of  $x$  is:  
 A) 20    B) 35    C) 25    D) 30
64. The focus of the parabola  $y^2 - x - 2y + 2$  is:  
 A)  $(\frac{1}{4}, 0)$     B)  $(\frac{1}{4}, 1)$     C) (1, 1)    D)  $(\frac{5}{4}, 1)$
65. The eccentricity of the ellipse  $9x^2 + 5y^2 - 30y = 0$  is:  
 A)  $\frac{2}{3}$     B)  $\frac{5}{9}$     C)  $\frac{9}{5}$     D)  $\frac{4}{3}$

66. If  $\sin^{-1}x + \sin^{-1}y = \frac{3\pi}{4}$ , then  $\cos^{-1}x + \cos^{-1}y =$
- A)  $\frac{3\pi}{4}$       B)  $\frac{3\pi}{2}$       C)  $\frac{\pi}{4}$       D)  $\frac{\pi}{2}$
67. The areas of two circles are in the ratio 1:3. If the circles are bent in the form of squares, what is the ratio of their areas?
- A) 1:2      B) 1:3      C)  $1:\sqrt{2}$       D)  $1:\sqrt{3}$
68. Find the area of a trapezium whose parallel sides are 15 cm and 20 cm long and the distance between them is 10cm:
- A)  $250 \text{ cm}^2$       B)  $175 \text{ cm}^2$       C)  $250 \text{ cm}^2$       D)  $350 \text{ cm}^2$
69. The volume of a right circular cone is  $600 \text{ cm}^3$ . If its height is 12 cm, then the area of its base is:
- A)  $50 \text{ cm}^2$       B)  $120 \text{ cm}^2$       C)  $150 \text{ cm}^2$       D)  $100 \text{ cm}^2$
70. A solid metallic sphere of radius 15cm is melted and recast in the form of small spheres of radius 3 cm. How many small spheres are formed?
- A) 25      B) 115      C) 102      D) 125
71. If  $x^2 + \frac{1}{x^2} = 18$ , then  $x^4 + \frac{1}{x^4} =$
- A) 326      B) 324      C) 322      D) 522
72. The value of  $\cos 12^\circ + \cos 84^\circ + \cos 156^\circ + \cos 132^\circ =$
- A) 0.5      B) 0      C) 1      D) None of these
73. The number of tangents that can be drawn from (-1, 3) to  $x^2 + y^2 = 10$  is:
- A) 1      B) 0      C) 2      D) More than 2
74. Equation to the locus of a point equidistant from the points A(1, -5) and B (-2,3) is:
- A)  $x - 4y = 4$       B)  $6x - 16y = 13$   
 C)  $16x - 6y = -13$       D)  $6x + 16y = 13$
75. The sixth and eleventh term of a harmonic progression are  $\frac{1}{11}$  and  $\frac{1}{19}$  respectively. Then its second term is:
- A)  $\frac{1}{3}$       B)  $\frac{23}{5}$       C) 1      D) None of these

76. The value of  $[(15^3 \times 3^{15} \times 2^3) \div (30^3 \times 3^{12})]^2$  is:  
 A) 81                      B) 729                      C) 5832                      D) 3645
77. Which of the fractions is the largest?  
 A)  $\frac{5}{7}$                       B)  $\frac{7}{9}$                       C)  $\frac{9}{11}$                       D)  $\frac{11}{13}$
78. If  $P : Q = 3 : 5$  and  $Q : R = 7 : 11$ , then,  $P:Q:R$  is:  
 A) 15:25:55              B) 15:35:55              C) 21:35:55              D) 21:49:77
79. If  $a^2 + b^2 + c^2 = 25$  and  $a + b + c = 7$ , then  $(ab + bc + ca)^2$  is:  
 A) 144                      B) 576                      C) 324                      D) 81
80. The area of a square is 100 sq.cm. If the side length increased by 3 cm, what will be the percentage increase in the area?  
 A) 3%                      B) 9%                      C) 69%                      D) 169%
81. The average mark of 75% of the total number of students in a class is 80% of the class average. Then how much of the class average will be the average mark of the remaining 25% ?  
 A) 160%                      B) 120%                      C) 60%                      D) 20%
82. The value of  $\sqrt{539} + \sqrt{396} - \sqrt{275}$  is:  
 A)  $\sqrt{891}$                       B)  $\sqrt{704}$                       C)  $\sqrt{635}$                       D)  $\sqrt{176}$
83. Which of the following numbers is the smallest number which is completely divisible by all integers from 1 to 10 ?  
 A) 840                      B) 1260                      C) 2520                      D) 5040
84. If the price of a commodity increased by 20%, then what percentage is the reduction in consumption so that the expenditure remains the same?  
 A)  $83\frac{1}{3}$                       B) 16                      C)  $16\frac{1}{3}$                       D)  $16\frac{2}{3}$
85. What is the unit digit of the number  $(2148)^{26}$  ?  
 A) 8                      B) 4                      C) 2                      D) 6



86. Two litres of a mixture contains kerosene and petrol in the ratio 2:3. To prepare a new mixture containing kerosene and petrol in the ratio 3:2, how much more kerosene should be added?  
 A) 1.2 litres    B) 1 litre    C) 0.8 litre    D) 0.6 litre
87. If  $23^p + 32^p$  is divisible by 55, then the value of p is?  
 A) 10    B) 8    C) 6    D) 11
88. The remainder when  $9^1 + 9^2 + 9^3 + 9^4 + 9^5 + 9^6 + 9^7$  is divided by 6 is:  
 A) 0    B) 1    C) 3    D) 5
89. The number of numbers greater than 3000 that can be formed from the digits 1, 2, 3, 4, 5 and 6 if repetition is not allowed is:  
 A) 240    B) 2500    C) 500    D) 1296
90. A man travelled from P to Q at the rate of 5km per hour. Had he travelled at the rate of  $4\frac{2}{3}$  km per hour he would have taken 3 more hours to reach the destination. What is the distance between P and Q?  
 A) 42 km    B) 168 km    C) 84 km    D) 210 km
91. Complete the series: 0, 4, 18, \_\_, 100, 180  
 A) 32    B) 40    C) 48    D) 64
92. Complete the series: 26AZ1, 24CX9, \_\_, 20GT49  
 A) 22EV16    B) 22DV25    C) 22DV16    D) 22EV25
93. Some of the letters of the series “ a\_aab\_aa\_a\_a\_b “ are missing which are given in that order as one of the alternatives given below. Choose the correct alternative.  
 A) babab    B) ababa    C) babaa    D) abbba
94. State which of the conclusions follow from the statements given below:  
 Statements : All apples are grapes. Some grapes are oranges  
 Conclusions : 1. Some apples are oranges;    2. Some oranges are apples  
                   3. Some oranges are grapes;    4. Some grapes are apples
- A) Only 3 and 4 follow    B) Only 1 and 2 follow  
 C) Only 2 and 3 follow    D) None follows

95. Following the situation, four probable answers are given as alternatives. Choose the most suitable alternative.

You came to know your boss spies on your work in the office all the time. You will:

- A) Ignore the boss
- B) Subtly convey it to the boss
- C) Just do your work sincerely
- D) Tell the matter to others in the office

Questions (96 to 100): Below is given a passage followed by several possible inferences which can be drawn from the facts stated in the passage. You have to examine each inference separately in the context of the passage, decide upon its degree of truth and choose your answer.

Women empowerment is the freedom of women to make their own decisions in familial, social and political matters. They should have the right in deciding what's right for them and what's wrong for them. Women have suffered through the decades because they didn't have any rights. Almost every country, no matter how progressive has a history of ill-treating women. While the western countries are still making progress, third world countries like India still lack behind in Women Empowerment. In India, many women empowerment programs made them aware of their rights and how they must make their own place in society rather than depending on a man. But, we still have a long way to go. Female education plays an important role in women empowerment. Also, they need employment skills to earn themselves. Women must be given equal opportunities in every field, irrespective of gender. Moreover, they must also be given equal pay. We can empower women by ensuring school education for all girls, providing employment and political participation.

96. Women empowerment ensures the freedom of women in decision making in society.

- A) Definitely true
- B) Definitely false
- C) Probably false
- D) Data inadequate

97. School education for girls must be made compulsory for women empowerment.

- A) Data inadequate
- B) Definitely false
- C) Definitely true
- D) Probably false

98. In India, governments failed to implement any women empowerment programs

- A) Definitely true
- B) Definitely false
- C) Probably false
- D) Data inadequate

99. In families, men beat up their wives and abuse them.  
A) Definitely true                      B) Definitely false  
C) Probably false                      D) Data inadequate
100. Western countries are better in women empowerment compared to third world countries.  
A) Definitely false                      B) Definitely true  
C) Probably false                      D) Data inadequate

**Read the following passage and answer the questions 101 to 105 given below choosing the best from the given options:**

Memory is not something that can be seen, touched or weighed. It is an abstraction that involves a set of skills rather than an object. Memory consists of three stages : acquisition, storage and retrieval. Acquisition refers to learning the material; storage refers to keeping the material in the brain until it is needed; and retrieval refers to getting the material back when it is needed. These three stages may be regarded as the 3 R's of Remembering: Recording, Retaining and Retrieving. Retrieving is the hardest part, but we can improve it by improving our methods of recording.

Memory consists of two different processes: short-term memory and long-term memory. Short-term memory has a limited capacity and a rapid forgetting rate. Its capacity can be increased by chunking, or grouping separate bits of information into larger chunks. Long-term memory has a virtually unlimited capacity.

101. Memory is regarded as an abstraction because -----.  
A) it involves an object              B) it is a concrete faculty  
C) it consists of three stages      D) it cannot be seen, touched or weighed
102. ----- involves using the material when it is required.  
A) Recording    B) Acquisition    C) Storage        D) Retrieval
103. ----- refers to recording the material.  
A) Acquisition    B) Storage        C) Retaining     D) Memory
104. Grouping separate bits of information into larger chunks is referred to as -----.  
A) retaining     B) chunking      C) recording     D) retrieving
105. Which word in the passage means 'quick'?  
A) abstraction    B) retrieval      C) rapid          D) short-term

106. Renu completed her work, -----? (Add a suitable question tag)  
 A) isn't it      B) didn't she      C) did she      D) hadn't she
107. It is very hot. (Convert into an exclamatory sentence)  
 A) How hot is it!      B) How hot it is!  
 C) How hot was it!      D) How very hot it is!
108. Pick out the correct sentence:  
 A) He wrote two letters since morning.  
 B) He has written two letters since morning.  
 C) He has been written two letters since morning.  
 D) He has wrote two letters since morning.
109. The project appeared to be simple, but we *faced* many difficulties when we started it. (Replace the word in italics with the correct phrase)  
 A) came across      B) came up to  
 C) came to      D) came along

**Qns. 110 – 115 Fill up the blank using the correct options**

110. A ----- is a person who pretends to be what he is not.  
 A) hyperbolic      B) hypocrite      C) sycophant      D) altruist
111. ----- he got the book, he started reading.  
 A) No sooner than      B) Hardly did  
 C) As soon as      D) As long as
112. He bought the pen from a ----- shop near his house.  
 A) stationary      B) stationery      C) stationry      D) statianery
113. The invaders ----- the city.  
 A) stole      B) plundered      C) aggravated      D) hailed
114. Susan is very confident of winning the race, but her friend Teena is -----.  
 A) diffident      B) provident      C) positive      D) prudent
115. He could not finish the work ----- he was very tired.  
 A) since      B) hence      C) nevertheless      D) despite
116. Who is the present Cabinet Minister for Education, Government of India?  
 A) Kiran Rijju      B) Ramesh Pokhriyal  
 C) Prakash Javadekar      D) Dharmendra Pradhan

117. Mahl is one of the principal languages of:  
A) Andaman & Nicobar      B) Bastar region of Chhattisgarh  
C) Lakshadweep              D) Meghalaya
118. The world chess championship 2023 was won by:  
A) Ian Nepomniachtchi      B) Ding Liren  
C) Zhu Chen                  D) Magnus Carlsen
119. The Lyricist of the telugu song 'Nattu nattu' which won the Golden Globe Award:  
A) Kaala Bhairava              B) Rahul Sipligunj  
C) Keeravani                  D) Chandrabose
120. The G7 summit 2023 was held from May 19-21 at ----- Japan.  
A) Hiroshima    B) Tokyo      C) Kyoto      D) Yokohama
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