

Section A: Mathematics (Q. No. 1 to 25)

1. What is the value of  $\sqrt{225}$ ?

- A) 10
- B) 12
- C) 15
- D) 18

2. If  $x = 5$  and  $y = 12$ , what is the value of  $x^2 + y^2$ ?

- A) 119
- B) 125
- C) 144
- D) 169

3. Solve for  $x$ :  $3x - 7 = 2$ .

- A) 3
- B) 4
- C) 5
- D) 6

4. What is the value of  $\int x^2 dx$ ?

- A)  $\frac{x^3}{3} + C$
- B)  $\frac{x^2}{2} + C$
- C)  $x^2$
- D)  $x^3 + C$

5. The solution to the equation  $x^2 - 9 = 0$  is:

- A) 3
- B) -3
- C)  $\pm 3$
- D) 9

6. If the matrix  $A = \begin{pmatrix} 2 & 3 \\ 1 & 4 \end{pmatrix}$ , what is the determinant of  $A$ ?

- A) -5
- B) 5
- C) 6
- D) 7

7. The derivative of  $\cos(x)$  with respect to  $x$  is:

- A)  $\sin(x)$
- B)  $-\sin(x)$
- C)  $\cos(x)$
- D)  $-\cos(x)$

8. Solve for  $x$ :  $x^2 - 6x + 9 = 0$ .

- A) 3
- B) -3
- C) 6
- D) 0

9. What is the value of  $\lim_{x \rightarrow \infty} \frac{1}{x}$ ?

- A) 0
- B) 1
- C)  $\infty$
- D)  $-1$

10. The equation of a line with a slope of -1 and passing through the point (1, 2) is:

- A)  $y = -x + 3$
- B)  $y = -x + 1$
- C)  $y = x - 2$
- D)  $y = x + 2$

11. The sum of the first 15 natural numbers is:

- A) 105
- B) 110
- C) 120
- D) 130

12. If  $f(x) = x^4$ , what is  $f'(x)$ ?

- A)  $4x$
- B)  $4x^3$
- C)  $x^4$
- D)  $4x^2$

13. The area of a triangle with base 10 units and height 6 units is:

- A) 20
- B) 30
- C) 40
- D) 60

14. Solve for  $y$ :  $y = 3x + 2$  when  $x = 4$ .

- A) 8
- B) 10
- C) 12
- D) 14

15. The solution to the differential equation  $\frac{dy}{dx} = x$  is:

- A)  $y = e^x$
- B)  $y = e^{-x}$
- C)  $y = \frac{x^2}{2} + C$
- D)  $y = x$

16. The mean of the numbers 5, 10, 15, 20, 25 is:

- A) 10
- B) 15
- C) 20
- D) 25

17. The value of  $\sin(30^\circ)$  is:

- A) 0
- B) 0.5
- C)  $\sqrt{3}$
- D)  $\sqrt{2}$

18. If  $a = 4$  and  $b = 5$ , what is  $a^2 + b^2$ ?

- A) 41
- B) 42
- C) 45
- D) 50

19. The probability of rolling a 3 on a fair six-sided die is:

- A) 0
- B) 1
- C)  $\frac{1}{6}$
- D)  $\frac{1}{3}$

20. What is the mode of the numbers 2, 4, 4, 6, 8, 8, 8?

- A) 2
- B) 4
- C) 6
- D) 8

21. The exponential function  $e^x$  is:

- A) Linear
- B) Quadratic
- C) Exponential
- D) Logarithmic

22. The quadratic equation  $x^2 - 7x + 12 = 0$  has roots:

- A) 3, 4
- B) 2, 6
- C) 3, 5
- D) 4, 6

23. The sum of the interior angles of a quadrilateral is:

- A)  $90^\circ$
- B)  $180^\circ$
- C)  $270^\circ$
- D)  $360^\circ$

24. The point where the y-axis and the line  $y = 2x + 3$  intersect is:

- A) (0, 2)
- B) (0, 3)
- C) (2, 0)
- D) (3, 0)

25. The standard deviation measures the:

- A) Central tendency
  - B) Dispersion
  - C) Skewness
  - D) Kurtosis
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### Section B: Logical Reasoning (Q. No. 28 to 50)

28. If all dogs are animals and some animals are pets, which of the following is true?

- A) All dogs are pets
- B) Some dogs are pets
- C) No dogs are pets
- D) Some pets are dogs

29. What comes next in the sequence: 1, 4, 9, 16, \_\_\_?

- A) 20
- B) 25
- C) 30
- D) 36

30. If the code for CAT is DBU, what is the code for DOG?

- A) DPH
- B) EOH
- C) EPH
- D) EOF



31. Which number is the odd one out: 2, 4, 6, 8, 10, 12, 15?

- A) 4
- B) 6
- C) 10
- D) 15

32. If A is B's father, B is C's sister, and C is D's mother, what is A's relationship to D?

- A) Grandfather
- B) Father
- C) Uncle
- D) Brother

33. Find the missing number in the series: 3, 6, 12, 24, \_\_\_\_.

- A) 36
- B) 48
- C) 60
- D) 72

34. In a row of students, Ravi is 7th from the left and Sita is 12th from the right. If there are 5 students between them, how many students are there in the row?

- A) 22
- B) 23
- C) 24
- D) 25



35. Which of the following is a valid conclusion if all fruits are sweet and some sweets are chocolates?

- A) All fruits are chocolates
- B) Some fruits are chocolates
- C) No fruits are chocolates
- D) Some sweets are fruits

36. If it is 2 PM now, what will be the time 11 hours later?

- A) 11 PM
- B) 1 AM
- C) 12 AM
- D) 3 AM

37. Find the odd one out: Apple, Banana, Cherry, Potato.

- A) Apple
- B) Banana
- C) Cherry
- D) Potato

38. If 'CLOUD' is coded as 'DMPVE', how is 'RAIN' coded?

- A) SBJO
- B) SBJO
- C) TBSO
- D) QBHO

39. In a row of boys, A is 15th from the left and B is 18th from the right. If there are 6 boys between A and B, how many boys are there in the row?

- A) 39
- B) 38
- C) 40
- D) 41

40. What comes next in the series: P, R, T, V, \_\_\_?

- A) X
- B) Y
- C) W
- D) Z

41. Choose the word which is least like the others in the group: Lion, Tiger, Elephant, Deer.

- A) Lion
- B) Tiger
- C) Elephant
- D) Deer

42. If the positions of the first and the fifth letters of the word 'BRIDGE' are interchanged, which of the following will be the third letter from the left end?

- A) R
- B) D
- C) B
- D) I

43. In a certain code, '2-4-1' means 'WATER IS COLD'. What does '4-1-3' mean in that code?

- A) IS COLD HOT
- B) COLD IS WATER
- C) HOT IS COLD
- D) WATER HOT IS

44. If '+ + -' means 'addition', and '- - +' means 'subtraction', what is the value of  $8 + + 2 - - + 3$ ?

- A) 11
- B) 7
- C) 13
- D) 15

45. What will be the value of the expression if  $A = 3$ ,  $B = 4$ , and  $C = 5$ :  $A(B + C)$ ?

- A) 9
- B) 12
- C) 27
- D) 35

46. If 'ORANGE' is coded as 'PVBODF', how is 'APPLE' coded?

- A) BQQMF
- B) BQPLF
- C) BQKMF
- D) BQPLG

47. Complete the series: 5, 10, 20, 40, 80, \_\_\_\_.

- A) 120
- B) 160
- C) 180
- D) 200

48. What comes next in the sequence: W, U, S, Q, \_\_\_\_?

- A) O
- B) R
- C) P
- D) T

49. Which number does not belong in the series: 4, 8, 12, 16, 20, 25?

- A) 8
- B) 12
- C) 16
- D) 25

50. A is 30% taller than B. By what percentage is B shorter than A?

- A) 23.08%
- B) 30%
- C) 20%
- D) 25%

### Section C: Computer Science (Q. No. 51 to 75)

51. Which of the following is not an operating system?

- A) Windows
- B) Linux
- C) Oracle
- D) DOS

52. What does HTML stand for?

- A) HyperText Markup Language
- B) Hyperlinks and Text Markup Language
- C) Home Tool Markup Language
- D) Hyper Tool Markup Language

53. The brain of any computer system is:

- A) ALU
- B) Memory
- C) CPU
- D) Control Unit

54. Which of the following is a primary memory device?

- A) Floppy Disk
- B) Hard Disk
- C) CD-ROM
- D) RAM

55. The full form of GUI is:

- A) Graphical Uninstall/Install
- B) Graphical User Interface
- C) General Utility Interface
- D) Graphical Unit Interface

56. The shortcut key to copy selected text is:

- A) Ctrl + X
- B) Ctrl + C
- C) Ctrl + V
- D) Ctrl + P

57. Which language is directly understood by the computer without a translation program?

- A) Assembly Language
- B) Machine Language
- C) High-Level Language
- D) None of the above

58. A small piece of data sent from a website and stored in a user's web browser is called:

- A) Virus
- B) Malware
- C) Cookie
- D) Script

59. Which of the following is used to identify a web page on the internet?

- A) HTML
- B) CSS
- C) URL
- D) HTTP

60. The protocol used for sending email is:

- A) FTP
- B) HTTP
- C) SMTP
- D) SNMP

61. The basic unit of a worksheet into which data is entered in Excel is called a:

- A) Table
- B) Box
- C) Cell
- D) Column

62. The 'http' you type at the beginning of any site's address stands for:

- A) Hyper Text Transfer Protocol
- B) Hyper Text Transfer Plotter
- C) High Text Transfer Protocol
- D) High Text Transfer Plotter

63. Which of the following is not a database management system?

- A) MySQL
- B) Oracle
- C) Sybase
- D) COBOL

64. Which device is used to connect different networks?

- A) Router
- B) Switch
- C) Hub
- D) Bridge

65. The function of the ALU (Arithmetic Logic Unit) is to:

- A) Perform arithmetic and logical operations
- B) Store data
- C) Control system functions
- D) Manage memory

66. Which one of the following is an input device?

- A) Monitor
- B) Printer
- C) Keyboard
- D) Speaker



67. The shortcut key to paste copied content is:

- A) Ctrl + X
- B) Ctrl + C
- C) Ctrl + V
- D) Ctrl + P

68. Which of the following is an example of an email client?

- A) Gmail
- B) Outlook
- C) Facebook
- D) Twitter

69. The software that allows users to surf the internet is called:

- A) Operating System
- B) Browser
- C) Server
- D) Compiler

70. Which of the following is not a programming language?

- A) Python
- B) Java
- C) C++
- D) HTML

71. The extension of a file created in PowerPoint is:

- A) .doc
- B) .xls
- C) .ppt
- D) .txt

72. In binary language, each letter, number, or special character is made up of a unique combination of:

- A) Eight bytes
- B) Eight kilobytes
- C) Eight bits
- D) Eight megabytes

73. Which of the following is not a web browser?

- A) Firefox
- B) Chrome
- C) Safari
- D) Facebook

74. A computer virus is:

- A) A form of email
- B) A type of search engine
- C) A malicious program
- D) A part of the CPU

75. The internet was originally developed by:

- A) Microsoft
- B) Apple
- C) NASA
- D) ARPANET