Note - The answers marked in this paper are unofficial. Refer official answer key for correct answers

Version Code:- B1

PART A

Each question carries ***one*** *mark.*

1. Pratyush is the _____ fastest supercomputer in the world.
   (A) first
   (B) second
   (C) third
   (D) fourth

2. The main purpose of time sharing techniques used in computers is to make the best use of :
   (A) Central Processing Unit
   (B) Peripherals
   (C) Secondary storage
   (D) Floppy disks

3. A joystick is primarily used to/for :
   (A) Control sound
   (B) Computer gaming
   (C) Draw pictures
   (D) Enter text

4. Which of the following is the largest unit of storage ?
   (A) TB
   (B) MB
   (C) KB
   (D) GB

5. The use of combination of 1's and 0's is the feature of which of the following type of computer language ?
   (A) High Level Language
   (B) PASCAL
   (C) Machine language
   (D) COBOL

6. The two categories of software are :
   (A) Word processing and Spreadsheet
   (B) Transaction and Application
   (C) Windows and MacOS
   (D) System and Application

7. What does the acronym ISP stand for ?
   (A) Internet Service Provider
   (B) Internal Service Provider
   (C) Internet Service Providing
   (D) Internet Service Provision

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8. The one's complement of binary number 101010 is :

(A) 010110
(B) 010101
(C) 110111
(D) 101011

9. Which of the following uses the spawn mechanism to duplicate itself ?

(A) Trojan Horse
(B) Worm
(C) Keystroke Logger
(D) Logic Bomb

10. To move to the bottom of a document while working on MS Word, which key is used ?

(A) Home key
(B) End key
(C) Insert key
(D) Ctrl key + End key

11. Integrated Circuit (IC) chips used in computers are made with :

(A) Copper
(B) Aluminium
(C) Silicon
(D) Silver

12. Binary system is also called :

(A) Base one system
(B) Base two system
(C) Base system
(D) None of the above

13. What is Backup ?

(A) Connecting the user's network to more components
(B) Copying of files to save data from original source to another destination
(C) Filtering on old data from new data
(D) Accessing data from tape

14. Error in a program is called :

(A) Bug (B) Debug (C) Virus (D) Noise

15. Windows XP was released in the year :

(A) 2000 (B) 1998 (C) 1999 (D) 2001

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16. If in a certain code language 'CROWNED' is written as 'PSDVEFO', which word will be coded as 'STREAMS' ?

(A) QSRDTNB
(B) SUTDTNB
(C) TUSDTNB
(D) SUTDBNT

17. Nithish leaves his house. He walks 20 m in North-West direction and then 40 m in South-West direction. Next he moves 40 m in South-East direction. Finally he turns towards his house. In which direction is Nithish going ?

(A) North-West
(B) South-East
(C) North-East
(D) South-West

18. 'M' is the daughter of 'N'. 'N' is married to 'Y'. 'G' is the mother of both 'Y' and 'Q'. 'Q' is the only son of 'X'. 'X' is the brother of 'H'. How is 'M' related to 'Q' ?

(A) Son-in-law
(B) Daughter
(C) Niece
(D) Grand-daughter

19. What comes in the place of question mark (?) in the following number series ?

330, 80, 280, 120, 250, ?

(A) 160 (B) 180 (C) 110 (D) 140

20. Find the odd one.

(A) 321 (B) 876 (C) 987 (D) 345

21. Given the following three-digit numbers :

684, 512, 437, 385, 296

What will be the resultant number if the second digit of the second lowest number is divided by the third digit of the highest number ?

(A) 3
(B) 0
(C) 2
(D) 1

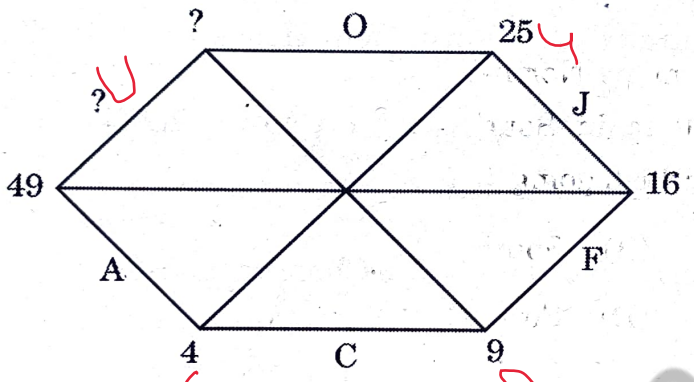
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22. Which one of the following interchange of signs would make the given equation correct ?

$5 + 3 \times 8 - 12 \div 4 = 3$

(A) + and + (B) + and × (C) − and × (D) − and ÷

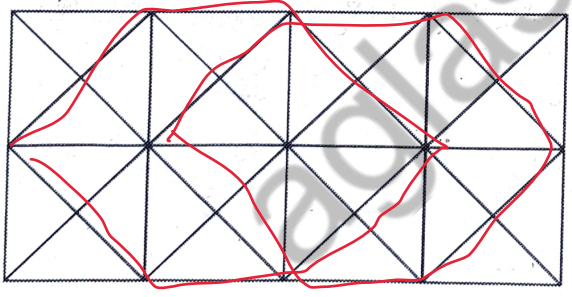
23. Find the missing letter and number in the following :



(A) Y and 40 (B) X and 81

(C) W and 64 (D) U and 36

24. How many hexagons are there in the following figure ?



(A) 15 (B) 12 (C) 14 (D) 20

25. Find the missing number in the following :

6	2	3
5	7	4
9	8	1
?	1	6

(A) 2 (B) 6 (C) 9 (D) 8

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26. Which of the following programme/scheme is ***not*** run by Government of India under National Health Mission ?

(A) Mission Indradhanush
(B) Janani Suraksha Yojana
(C) Rashtriya Bal Swasthya Karyakram
(D) Prasuti Araike

27. Who is the architect of the recently inaugurated New Parliament House which is situated in New Delhi ?

(A) Bimal Patel
(B) Bijoy Jain
(C) B.V. Doshi
(D) Rahul Mehrotra

28. Which of the following statements is/are correct with regard to Chandrayaan-3 ?

I. It was launched on 15th July, 2023.
II. It was launched from Satish Dhawan Space Centre.
III. Dr. P. Veeramuthuvel is the Mission Director.
IV. The rocket which was used for the launch is LVM3-M4.

Codes :

(A) All the above
(B) Only II and IV
(C) Only II
(D) Only III

29. The first Vande Bharat Express train which was inaugurated on February 18, 2019 runs between which of the following cities ?

(A) Mumbai – Sainagar Shirdi
(B) Puri – Howrah
(C) Varanasi – New Delhi
(D) Bengaluru – Dharwad

30. At present who is the Comptroller and Auditor General of India ?

(A) Girish Chandra Murmu
(B) V. Narahari Rao
(C) Shashikant Sharma
(D) M.K. Jain

31. The National Green Hydrogen Mission aims to enable India to be energy independent by which year ?

(A) 2030
(B) 2035
(C) 2042
(D) 2047

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32. Expand 'UPI'.

(A) United Payment India
(B) Unified Payment Interface
(C) Unique Payment Information
(D) Unified Payment Information

33. Which of following is/are ***wrongly*** matched ?

	Product		*GST Rate*
I.	Lassi	–	5%
II.	Sugar	–	0%
III.	Butter	–	12%
IV.	Pasta	–	28%
V.	Toothpaste	–	18%

Codes :

(A) Only II and IV
(B) Only I
(C) Only I, II and IV
(D) None of the above

34. Which of the following pairs is ***wrongly*** matched ?

	Name of the Jnanpith Awardee		*Language*
(A)	Damodar Mauzo	–	Konkani
(B)	Krishna Sobti	–	Hindi
(C)	Pratibha Ray	–	Odia
(D)	Kedarnath Singh	–	Punjabi

35. Which of the following pairs is ***wrongly*** matched ?

	Acquirer Bank		*Merger Bank*
(A)	Indian Bank	–	Vijaya Bank
(B)	Canara Bank	–	Syndicate Bank
(C)	Union Bank of India	–	Andhra Bank
(D)	Punjab National Bank	–	United Bank of India

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36. The synonym of 'Circumscribe' is :

(A) Din

(B) Mention

(C) Restrict

(D) Alliance

37. The antonym of 'Philanthropist' is :

(A) Disphilanthropist

(B) Unphilanthropist

(C) Disanthropist

(D) Misanthropist

38. Choose the correct meaning of the underlined phrase.

Mr. Jacob pulled through his illness.

(A) recover

(B) leave

(C) give up

(D) suppress

39. Identify the correct meaning of the idiomatic expression 'uphill task'.

(A) Simple work

(B) Hard work

(C) Discontinuous work

(D) Continuous work

40. I saw four _____ in the forest.

(A) deer

(C) deering

(B) deers

(D) deered

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41. The thirty-first term of $\frac{1}{3}, \frac{1}{7}, \frac{1}{11}, \frac{1}{15}, \frac{1}{19}, \ldots$ is :

(A) $\frac{1}{128}$ (B) $\frac{1}{132}$ (C) $\frac{1}{150}$ (D) $\frac{1}{154}$

42. If $A = \begin{bmatrix} \cos\alpha & \sin\alpha \\ -\sin\alpha & \cos\alpha \end{bmatrix}$, then the value of AA' is :

(A) 0 (B) I (C) 2I (D) 3I

43. How many three-digit odd numbers can be formed from the digits 5, 6, 7, 8, 9 if the digits can be repeated ?

(A) 25 (B) 50 (C) 75 (D) 100

44. The coefficient of y in the expansion of $\left(y^2 + \frac{c}{y}\right)^5$ is :

(A) $4c^2$ (B) $10c^2$ (C) $5c^3$ (D) $10c^3$

45. The co-ordinates of a point dividing the line segment joining (1, 2) and (4, 5) internally in the ratio 2 : 1 are :

(A) (3, 4) (B) (4, 3) (C) (5, 4) (D) (5, 3)

46. The centre and radius of the circle with equation $x^2 + y^2 - 4x - 10y + 4 = 0$ are :

(A) (–2, –5), 3 (B) (–2, –5), 5

(C) (2, 5), 3 (D) (2, 5), 5

47. The coordinates of the foci of the ellipse $9x^2 + 4y^2 = 36$ are :

(A) $(0, \sqrt{5}), (0, -\sqrt{5})$ (B) (0, 5), (0, – 5)

(C) $(\sqrt{5}, 0), (-\sqrt{5}, 0)$ (D) (5, 0), (– 5, 0)

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48. The number of vertices and foci of a hyperbola respectively are :

(A) two, one
(B) one, one
(C) two, two
(D) one, two

49. If A, B, C are three matrices such that all the matrices are conformable for the pro matrices, then :

(A) (AB)C = (BA)C
(B) (AB)C = A(BC)
(C) (AB)C = C(AB)
(D) (AB)C = B(AC)

50. In Boolean algebra, X + Y = 1 if :

(A) X = 0, Y = 1
(B) X = 1, Y = 1
(C) X = 1, Y = 0
(D) X = 0, Y = 0

51. In Boolean algebra, the value of $(X + Y)(X + \bar{Y})$ is :

(A) X
(B) Y
(C) $\bar{X}$
(D) $\bar{Y}$

52. If $A = \begin{bmatrix} 1 & 0 \\ 0 & 2 \end{bmatrix}$, $B = \begin{bmatrix} 1 & 1 \\ 1 & 1 \end{bmatrix}$, then the value of $|AB|$ is :

(A) 1
(B) −1
(C) 0
(D) 2

53. The value of $\cos\left(\frac{\pi}{4} + x\right) + \cos\left(\frac{\pi}{4} - x\right)$ is :

(A) $\sqrt{2}\ \sin x$
(B) $\sqrt{2}\ \cos x$
(C) $2 \sin x$
(D) $2 \cos x$

54. The principal value of $\cot^{-1}\left(\frac{-1}{\sqrt{3}}\right)$ is :

(A) $\frac{\pi}{2}$
(B) $\frac{\pi}{3}$
(C) $\frac{2\pi}{3}$
(D) π

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55. The value of $\sin^{-1}\left(\sin\frac{3\pi}{5}\right)$ is :

(A) $\frac{\pi}{5}$ (B) $\frac{2\pi}{5}$

(C) $\frac{3\pi}{5}$ (D) $-\frac{3\pi}{5}$

56. The value of $3\sin\frac{\pi}{6}\sec\frac{\pi}{3} - 4\sin\frac{5\pi}{6}\cot\frac{\pi}{4}$ is :

(A) 0 (B) 1

(C) -1 (D) $\frac{1}{2}$

57. One card is drawn from a well-shuffled deck of 52 cards. If each outcome is equally likely, the probability that the card is a diamond is :

(A) $\frac{1}{2}$ (B) $\frac{1}{3}$ (C) $\frac{1}{4}$ (D) $\frac{1}{5}$

58. If σ is the standard deviation for a set of values in an x-series, the coefficient of variation is :

(A) $\frac{\sigma}{\bar{x}} \times 100$ (B) $\sqrt{\frac{\sigma}{\bar{x}}} \times 100$

(C) $\frac{\sigma}{x} \times 100$ (D) $\sqrt{\frac{\sigma}{x}} \times 100$

59. Which of the following values of the correlation coefficient r are valid ?

(A) -2 (B) $-1{\cdot}5$ (C) $0{\cdot}5$ (D) $1{\cdot}5$

60. If the regression line of y on x is $y = ax + b$ and regression line of x on y is $x = cy + d$, then which of the following is true ?

(A) $ac \leq 1, r = \pm\sqrt{ac}$ (B) $ac < 1, r = ac$

(C) $ac > 1, r = \pm\sqrt{ac}$ (D) $ac > 1, r = ac$

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PART B

Each question carries ***two*** *marks.*

61. Who among the following invented the computer language COBOL ?

(A) Grace Murray Hopper

(B) John McCarthy

(C) Guido van Rossum

(D) Brendan Eich

62. What is a website ?

(A) A place from where we can get information in documents and files

(B) A site that is owned by any particular company

(C) A location on world wide web

(D) A place from where we can access the Internet

63. Traditional LAN runs at a speed of _____.

(A) 1 to 10 Mbps

(B) 10 to 100 bps

(C) 100 to 1000 Mbps

(D) 1000 to 10,000 Mbps

64. Multiprogramming systems _____.

(A) are easier to develop than single programming systems

(B) execute each job faster

(C) execute more jobs in the same time period

(D) are used only on one large mainframe computer

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5. Find out the missing number in the following series :

4, 36, 144, ?, 900, 1764

(A) 25 (B) 20

(C) 49 (D) 100

6. A watch which gains uniformly, is 3 minutes slow at 12 noon on Sunday and is 5 minutes 36 seconds fast at 4 pm on the next Sunday. At what time was it correct ?

(A) 12 pm on Monday

(B) 12 am on Tuesday

(C) 12 am on Wednesday

(D) 12 am on the same day

27 | 03 | 1995

7. If 27th March, 1995 was a Monday, then what day of the week was 1st November, 1994 ?

(A) Wednesday (B) Tuesday

(C) Sunday (D) Monday

8. Krishna went 50 m South from his house, then turned left and went 30 m, then turning to North he went 50 m. In which direction is his home from this point ?

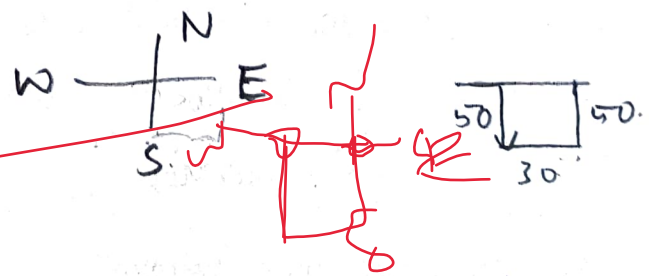
(A) North-West

(B) East

(C) North

(D) South-West

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9. In a hotel, 60% had vegetarian lunch while 30% had non-vegetarian lunch and 15% had both types of lunches. If 96 people were present, then how many did not eat either type of lunch ?

(A) 26 (B) 20

(C) 28 (D) 24

57

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70. Which of the following is/are ***wrongly*** matched ?

	Industrial City		*Industry*
I.	Korba	–	Aluminium
II.	Vapi	–	Ship-building
III.	Hissar	–	Steel
IV.	Dhanbad	–	Copper

(A) Only I

(B) Only II and IV

(C) All of the above

(D) None of the above

71. Which of following statement with regard to G20 Summit is ***wrong*** ?

(A) The 2023 G20 New Delhi Summit was the first ever G20 Summit to be held in India as well as in South Asia.

(B) In 2024, G20 Summit is scheduled to be held in Rio de Janeiro.

(C) In 2022, G20 Summit was held in Rome.

(D) The first G20 Summit was held in 2008 in Washington, D.C.

72. Which of the following ***cannot*** be a subordinate clause ?

(A) Prepositional clause

(B) Noun clause

(C) Adjective clause

(D) Adverb clause

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73. The factorization of $4(x + y)^2 - 28(x^2 - y^2) + 49(x - y)^2$ is :

(A) $(5x + 9y)^2$ (B) $(9y - 5x)^2$

(C) $(5y + 9x)^2$ (D) $(5y - 9x)^2$

74. The solution of $2x^2 - 8y^2 = 18$, $3x + 4y = 7$ is :

(A) $(x, y) = (3, -1)$ or $(5, -1)$ (B) $(x, y) = (3, 1)$ or $(5, 2)$

(C) $(x, y) = (3{\cdot}4, -0{\cdot}8)$ or $(5, -2)$ (D) $(x, y) = (3{\cdot}4, 0{\cdot}8)$ or $(5, 2)$

75. The distance of the point $(3, -5)$ from the line $3x - 4y - 26 = 0$ is :

(A) $\frac{1}{5}$ (B) $\frac{2}{5}$ (C) $\frac{3}{5}$ (D) $\frac{4}{5}$

76. The equation of the parabola which is symmetric about the y-axis and passes through the point $(2, -3)$ is :

(A) $4x^2 = -3y$ (B) $3x^2 = -4y$

(C) $2x^2 = -3y$ (D) $3x^2 = -2y$

77. Which of the following sets A, B, C, D, E are equal ?

$A = \{0\}$

$B = \{x : x > 15 \text{ and } x < 5\}$

$C = \{x : x - 5 = 0\}$

$D = \{x : x^2 = 25\}$

$E = \{x : x \text{ is an integral positive root of the equation } x^2 - 2x - 15 = 0\}$

(A) C, D, E (B) D, E (C) C, E (D) C, D

78. If $A \cup B = A \cap B$, then

(A) $A = B$ (B) $A = \bar{B}$ (C) $\bar{A} = B$ (D) $\bar{A} = \bar{B}$

79. If $\cot x = -\frac{5}{12}$ and x lies in the 2nd quadrant, then the value of sin x is :

(A) $\frac{13}{12}$ (B) $\frac{13}{14}$ (C) $\frac{12}{13}$ (D) $\frac{14}{13}$

80. In binary addition,

0111 + 0001 = _____.

(A) 111 (B) 1000 (C) 1001 (D) 1110

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