



UNIFIED CYBER OLYMPIAD

CLASS - 07

Question Paper Code : 3B107

KEY

1. B	2. D	3. C	4. A	5. C	6. C	7. B	8. A	9. D	10. C
11. B	12. D	13. A	14. D	15. C	16. A	17. A	18. B	19. C	20. A
21. B	22. B	23. A	24. B	25. A	26. D	27. A	28. C	29. C	30. C
31. D	32. B	33. B	34. C	35. D	36. A	37. B	38. C	39. B	40. D
41. A	42. C	43. C	44. D	45. D	46. D	47. C	48. D	49. D	50. B

SOLUTIONS

MENTAL ABILITY

01. (B) Let the CP of the article be ₹ x .

$$SP = ₹ \frac{4}{5}x$$

$$\text{Loss} = CP - SP$$

$$= ₹ x - \frac{₹4x}{5} = \frac{₹(5x - 4x)}{5}$$

$$= \frac{₹x}{5}$$

$$\text{Loss}\% = \frac{\text{Loss}}{CP} \times 100 = \left(\frac{₹x}{5} \right) \times 100$$

$$= 20\%$$

02. (D) $SI = \frac{PTR}{100}$

$$= \frac{₹ 75000 \times 7.5 \times 4}{700}$$

$$= ₹ 750 \times 30$$

$$= ₹ 22,500$$

03. (C) The ratio of A, B and C

$$= \frac{1}{3} : \frac{1}{4} : \frac{1}{6} = \frac{1}{3} \times 12 : \frac{1}{4} \times 12 : \frac{1}{6} \times 12 = 4 : 3 : 2$$

$$\text{Total ratio} = 4 + 3 + 2 = 9$$

$$\text{A's share} = \frac{\text{A's ratio}}{\text{Total ratio}} \times \text{Total amount}$$

$$= \frac{4}{9} \times 9000 = ₹ 4000$$

04. (A) Let the middle size piece length be x cm.

$$\text{Given } \left(2x + 5 + x + \frac{x}{2} \right) \text{cm} = 75 \text{ cm}$$

$$\left(\frac{4x + 10 + 2x + x}{2} \right) \text{cm} = 75 \text{ cm}$$

$$(7x + 10) = 75 \text{ cm} \times 2$$

$$7x = 150 \text{ cm} - 10 \text{ cm}$$

$$7x = 140 \text{ cm}$$

$$x = \frac{140}{7}$$

$$x = 20 \text{ cm}$$

$$\text{Shortest piece length} = \frac{x}{2} = \frac{20 \text{ cm}}{2}$$

$$= 10 \text{ cm}$$

05. (C) Let the breadth be x cm

$$\text{Length} = (3x + 4) \text{ cm}$$

$$\text{Given } 2(l \times b) = 104 \text{ cm}$$

$$l + b = \frac{104}{2} \text{ cm}$$

$$3x + 4 + x = 52$$

$$4x = 52 - 4$$

$$x = \frac{48}{4}$$

$$\text{Breadth } (x) = 12$$

$$\text{Length} = 3x + 4$$

$$= 3 \times 12 + 4$$

$$= 36 + 4 = 40 \text{ cm}$$

$$\text{Area} = lb$$

$$= 40 \text{ cm} \times 12 \text{ cm}$$

$$= 480 \text{ cm}^2$$

06. (C) Let the angle be x°

$$\text{Supplement of } x^\circ = (180^\circ - x)$$

$$\text{Given } x = 4(180^\circ - x)$$

$$x = 4 \times 180^\circ - 4x$$

$$x + 4x = 4 \times 180^\circ$$

$$5x = 4 \times 180^\circ$$

$$x = \frac{4 \times 180}{5}$$

$$x = 144^\circ$$

07. (B) Length of each piece

$$= \frac{\text{Total length}}{\text{Number of pieces}} = \frac{8\frac{1}{4} \text{ m}}{11}$$

$$\frac{33}{4} \times \frac{1}{11} \text{ m}$$

$$\frac{3}{4} \text{ m}$$

08. (A) $\frac{1.16}{x} = 0.0725$

$$1.16 = 0.0725 \times x$$

$$x = \frac{1.16}{0.0725} \times \frac{10000}{10000}$$

$$= \frac{11600}{725} = 16$$

09. (D) $\angle D = \angle E = 75^\circ$ [\because Alternative angles]

$$\text{But } \angle C + \angle D = 180^\circ$$

$$\angle C + 75^\circ = 180^\circ$$

$$\angle C = 180^\circ - 75^\circ$$

$$\angle C = 10^\circ$$

$$\angle B = \angle C = 105^\circ$$
 [\because Alternative angles]

$$\angle ABC - \angle CDE = \angle B - \angle D$$

$$= 105^\circ - 75^\circ$$

$$= 30^\circ$$

10. (C) Option (A) : Two angles sum

$$= 98^\circ + 82^\circ = 180^\circ$$

\therefore Third angle = Zero degree which is not possible

Option (B) : Sum of the two angles

$$147^\circ + 35^\circ = 180^\circ$$

\therefore Third angle = zero degrees which is not possible

$$\text{Option (C) : } 135^\circ + 10^\circ + x = 180^\circ$$

$$x = 180^\circ - 145^\circ$$

$$x = 35^\circ$$

\therefore 135° and 10° are the angles of a triangle

11. (B) $-\frac{7}{8} = -0.875$
 $-\frac{8}{9} = -0.888$
 $-\frac{125}{144} = -0.868$
 $-\frac{255}{288} = -0.885$
 $-0.888 < -0.885 < -0.875$
 $\therefore -\frac{255}{288}$ lies between $-\frac{7}{8}$ and $-\frac{8}{9}$

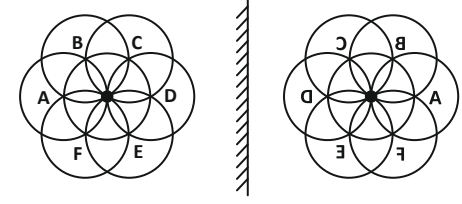
12. (D) It has infinite solutions

13. (A) Given SI = ₹ 29,628
P = ₹ 1,23,450
T = 3
 $I = \frac{PTR}{100}$
 $₹ 29,628 = \frac{1,23,450 \times 3 \times R}{100}$
 $R = \frac{₹ 29,628 \times 2}{₹ 2469 \times 3} = 8\%$

14. (D) $a^2 - 2ab + b^2 = 20^2 - 2(20)(-35) + 35^2$
 $= 400 + 1400 + 1225$
 $= 3025$

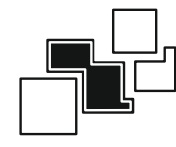
15. (C) $-\frac{19}{4} = -4.75$
 $-\frac{34}{7} = -4.857$
 $-\frac{13}{3} = -4.333$
 $-\frac{37}{4} = -4.625$
 $-4.857 < -4.75 < -4.625 < -4.33$
 \therefore Greatest rational number
 $= -4.33 = -\frac{13}{3}$

REASONING

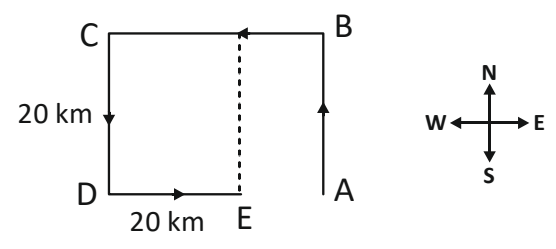
16. (A) 

17. (A) $18 \div 3 - 6 + 12 \times 2 = 24$

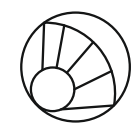
18. (B) Circles = T (Shared by 1 and 2)
Group of three = U (Shared by 1 and 3)
Group of four = W (Only found in 2)
Triangles = X (Only found in 3)
So we are looking for a group of four triangles (X, W)

19. (C) 

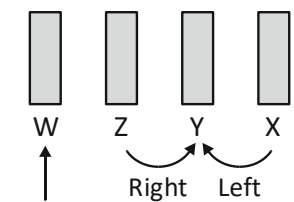
20. (A) Required distance = $40 - 20 = 20$ km



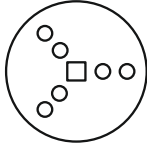
21. (B) All the elements of the top row moves to second row, second row elements move to third row and third row elements move to first row.
22. (B) $6 - 2 = 4^3 = 64$
 $5 - 3 = 2^3 = 8$
23. (A) Video, Voice, Woman, Worth, Youth
24. (B) Option (B) can be formed from the cut-pieces given in the question figure.



25. (A) Children W Z Y X are in order



26. (D)

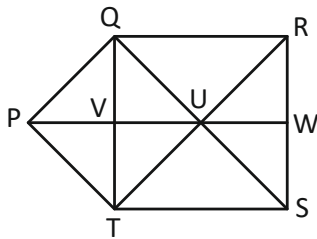


27. (A) 1,3,9 ; 2,5,6 ; 4,7,8

28. (C) 5, 1, 6, 2, 4, 3 = S I G N A L

29. (C) Explanation: Moving the letter "T" from "ACTING" to "TABLE" forms the words "ACING" and "TABLET."

30. (C) PQV, PVT, PQT, VQU, VUT, PQU, PUT, QUR, TUS, RUS, RUW, SUW, SQR, QTS, RTS, TQR, QUT



There are 17 triangles in the given figure.

COMPUTERS

31. (D) In Windows 10, the feature that allows you to customize the appearance and behavior of the desktop is called "Personalization."

32. (B) To store frequently accessed data for faster retrieval.

33. (B) The correct answer is (B) Automated programs designed to simulate conversation with human users, typically over the internet. Chatbots use artificial intelligence techniques to understand and respond to user queries, providing assistance, information, or performing tasks based on predefined instructions.

34. (C) The IF...THEN statement in QBASIC is used to make a decision based on a condition.

35. (D) In QBASIC programming language, the punctuation mark used to indicate the end of a statement or line of code is the semicolon (;). This symbol is used to separate multiple statements on the same line or to suppress the automatic newline

36. (A) High-level languages are designed to be easy for humans to understand and write. They use natural language constructs and are closer to human language than machine language or assembly language.

37. (B) IP stands for Internet Protocol. It is a set of rules governing the format of data sent over the Internet or other network and the addressing scheme for devices connected to the network.

38. (C) The Rehearse Timings feature in PowerPoint allows presenters to practice and record the timing of slide transitions and animations during a rehearsal.

39. (B) To start a new line of text or add spacing between lines or paragraphs of text in a worksheet cell, press Alt+Enter to insert a line break.

40. (D) All of the above

41. (A) Formatting

42. (C) The preview pane in word processing software allows you to preview the merged document to ensure accuracy and formatting before printing or sending it. Therefore, the correct answer is (C) Preview Pane.

43. (C) Adobe Flash CS6 was primarily used for designing interactive animations and applications. It allowed users to create vector-based graphics, animations, and multimedia content for web browsers, desktop platforms and mobile devices.

44. (D) Oval Tool

45. (D) All of the above

ENGLISH

46. (D) 'scalded' can be used to correctly replace the underlined in that sentence, as per the context.

47. (C) 'stationery, stationary' is the correct option to fill those blanks.

48. (D) 'glove' can be used to fill the blank to complete the idiom correctly. The idiom 'hand in glove with somebody' means 'to work closely with somebody, especially in a secret and/or illegal way'.

49. (D) 'Rotund' can be formed by using all its letters from that master word.

50. (B) Misoginist is the misspelt word. The correct spelling is Misogynist.