



Unified International Cyber Olympiad

UNIFIED INTERNATIONAL CYBER OLYMPIAD (UPDATED)

CLASS - 7

Question Paper Code : 3B117

KEY

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

SOLUTIONS

MENTAL ABILITY

01. (C) $n^2 + 1$ is always positive

02. (C) length = $\frac{x}{b}$, perimeter = $2(l + b)$

$$= 2\left(\frac{x}{b} + b\right) = \frac{2(x + b^2)}{b}$$

03. (B) LHS = $1 + 2 - 3 - 4 + 5 + 6 - 7 - 8 + \dots$
 $2020 + 2021$
 $= (-4) + (-4) \dots + (-4) + 2021$
 $= -4 \times 505 + 2021$
 $= -2020 + 2021 = 1$

04. (B) HCF of 200 & 80 is 40
 $\therefore$ Number of square pieces
 $= \frac{200 \times 80}{40 \times 40} = 10$

05. (B) Number of pieces = $116 \frac{2}{3} \div 8 \frac{1}{3}$

$$= \frac{\left(\frac{350}{3}\right)}{\frac{25}{3}} = \frac{350}{25} = 14$$

06. (D) $2n + 2n + 2 + 2n + 4 = 30$

$$6n = 24$$

$$n = 4$$

$$\therefore 2n + 4 = 8 + 2 = 12$$

07. (D) Volume = $l b h$

$$= \frac{25^5}{2} \times \frac{21}{4} \times \frac{24^6}{5} \text{ cm}^3$$

$$= 315 \text{ cm}^3$$

08. (C) Given $x = 31$ and $y = 43$

$$\therefore x - y = 31 - 43 = -12$$

09. (B) 5 books – 3 books = 2 books

$$= 2 \times 10 \text{ books} = 20 \text{ books}$$

10. (A) Area of each square = $\frac{80 \text{ cm}^2}{5} = 16 \text{ cm}^2$

$$\text{Side of each square} = \sqrt{16 \text{ cm}^2} = 4 \text{ cm}$$

$$\text{Perimeter of the given diagram}$$

$$= 120 = 48 \text{ cm}$$

11. (D) Required number = $\frac{-48}{-6} = 8$

12. (C) Option 'C' has only two lines of symmetry

13. (B) Given $2x - 10^\circ + 3x + 20^\circ = 180^\circ$

$$5x + 10^\circ = 180^\circ$$

$$5x = 180^\circ - 10^\circ$$

$$x = \frac{170^\circ}{5} = 34^\circ$$

$$\therefore \angle AOC = 2x - 10^\circ = 2 \times 34^\circ - 10^\circ = 68^\circ - 10^\circ = 58^\circ$$

14. (C) Given $3 \angle B = 2(\angle A + \angle B)$

$$3 \angle B = 2 \angle A + 2 \angle B$$

$$3 \angle B - 2 \angle B = 2 \angle A$$

$$\therefore \angle B = 2 \angle A$$

$$\text{But, } \angle A + \angle B + \angle C = 180^\circ$$

$$\angle A + 2 \angle A + 3 \times 2 \angle A = 180^\circ$$

$$9 \angle A = 180^\circ$$

$$\angle A = 20^\circ$$

$$\angle C = 6 \times \angle A = 6 \times 20^\circ = 120^\circ$$

15. (A) LHS = $\frac{5}{3} \times \frac{7}{5} \times \frac{9}{7} + \dots \times \frac{1001}{999} = \frac{1001}{3}$

REASONING

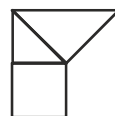
16. (D) 7 triangles are there in the given figure.

17. (D)

H	K	U	J	U	V	C	D
-2↓	-2↓	-2↓	-2↓	-2↓	-2↓	-2↓	-2↓
F	I	S	H	S	T	A	B

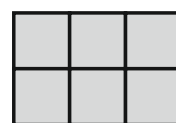
18. (B) North

19. (D) Second letter represents size, First letter represents pattern inside the shape.



20. (A)

21. (A) Except option (A) remaining options form cubes.



22. (D) 2nd number in each pair is the numbers in 1st number are written in ascending order.

23. (C) $6 \times 9 = 54$ (reading down the middle two blocks).

24. (A) 1,2,3 are figures composed of two straight lines.

4,5,6 are figures composed of three straight lines.

7,8,9 are figures composed of four straight lines.

25. (C) The pattern followed is:

$$\text{ACFH} : \text{SUXZ}$$

$$\Rightarrow A + 2 = C; C + 3 = F; F + 2 = h$$

$$\text{And } A + 18 = S$$

$$S + 2 = U; U + 3 = X; X + 2 = Z$$

$$\text{Similarly,}$$

$$\text{BDGI} : ?$$

$$\Rightarrow B + 2 = D; D + 3 = G; G + 2 = 1$$

$$\text{And } B + 18 = T$$

$$T + 2 = V; V + 3 = Y; Y + 2 = A$$

$$\text{Thus, TVYA is the answer}$$

26. (A) Hydrogen



27. (C)

28. (C)



29. (C) LOTUS

30. (C) The pattern of the series is alternatively +4 and -1.

$$2 + 4 = 6, 6 - 1 = 5, 5 + 4 = 9, 9 - 1 = 8, 8 + 4 = 12, 12 - 1 = 11, 11 + 4 = 15$$

Now continue the same pattern:-

$$15 - 1 = 14, 14 + 4 = 18$$

Hence, 14, 18 is the next series.

COMPUTERS

31. (C) 1-D, 2-C, 3-B, 4-A

32. (B) F8 is used to convert an object to symbol in flash.

33. (B) Department of Defense of USA set up a network of computers in 1969.

34. (A) Windows 7 is an operating system, which is a type of system software. Other options (MS-Paint, MS-Word, Solitaire) are application software.

35. (D) A Zip drive is a removable storage device capable of storing around 100–250 MB of data, commonly used for backup before large-capacity devices became widespread.

Pendrive and CD have varying capacities, often higher now.

DVD typically stores 4.7 GB.

36. (B) In Adobe Flash, pressing Ctrl + F8 opens the dialog box to create a new symbol (movie clip, button, or graphic).

37. (D) Terabyte (TB) is a unit of digital storage used to measure the capacity of hard drives, SSDs, and other storage media.

38. (C) In MS-Excel, pressing Alt + W + 2 splits the window into two panes or opens two worksheets side by side, allowing you to view both simultaneously.

39. (C) The given component is memory module (ram)

40. (C) We found the group 'finish' in mailings tab in MS Word.

41. (C) A scanner is a input device used to convert the hard copy of document to soft copy.

42. (B) Mozilla firefox is not a search engine among the options. It is a web browser.

43. (D) $=+\$B\$2*A4 \& =\$B2*A4$

44. (C) The given symbol is print.

45. (A) Interpreter

ENGLISH

46. (D)

47. (A)

48. (B)

49. (A)

50. (D) 'Lice' is a plural noun, (plural of 'Louse') and hence no article is to be used.

==== The End =====