UNIFIED COUNCIL
Foundation for Success

UNIFIED COUNCIL OLYMPIADS

UCO Unified Cyber Olympiad

UNIFIED CYBER OLYMPIAD (UPDATED)

CLASS - 7

Question Paper Code : 3O119

KEY

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

SOLUTIONS

MENTAL ABILITY

01. (B) $7 - \{6 - 12 \div (5 + 9 \times 2 - 19)\}$

$= 7 - \{6 - 12 \div (5 + 18 - 19)\}$

$= 7 - \{6 - 12 \div 4\}$

$= 7 - \left\{6 - \frac{12}{4}\right\}$

$= 7 - (6 - 3)$

$= 7 - 3$

$= 4$

02. (B) $\frac{29}{6} + \frac{(-4)}{5}$

$= \frac{29}{6} - \frac{4}{5}$

$= \frac{145 - 24}{30} = \frac{121}{30}$

$\frac{11}{15} \times \frac{1}{2} = \frac{11}{30}$

$\therefore$ Required fraction $= \frac{121}{30} \div \frac{11}{30}$

$= 11$

03. (A) Let the smallest part be 'x'

$\therefore$ Other part = $(231 - x)$

Given:

$$\frac{2}{3}x = \frac{1}{4} \times (231 - x)$$

$4 \times 2x = 3(231 - x)$

$8x = 3 \times 231 - 3x$

$3x + 8x = 3 \times 231$

$11x = 3 \times 231$

$$\therefore x = 3 \times \frac{231}{11} = 21$$

$3 \times 21 = 63$

04. (B) Let the small angle be 'x'

$\therefore$ Bigger angle = bx

Given $5x + x = 180°$

$6x = 180°$

$$x = \frac{180°}{60°}$$

$x = 30°$

$\therefore 5x = 5 \times 30° = 150°$

05. (D) $100^3 - 3 \times 100^2 \times 88 + 3 \times 100 \times 88^2 - 88^3$

$= 1000000 - 264 \times 10000 + 300 \times 7744 - 6,81,472$

$= 10,00,000 - 26,40,000 + 23,23,200 - 6,81,472$

$= 33,23,200 - 33,21,472$

$= 1728$

06. (C) Let the rate of interest be x % and principal be p.

$$\frac{P \times (x+2) \times 4}{100} - \frac{Px \times 4}{100} = Rs = 56$$

$$\frac{4P(x+2) - 4Px}{100} = Rs\ 56$$

$4Px + 8P - 4Px = Rs\ 56 \times 100$

$$P = Rs\ \frac{56 \times 100}{8} = 700$$

07. (A) BC = AD = 4 units

Length of 1 rectangle is 4 units.

Breadth of rectangle is 1 unit.

AB = 1 + 4 = 5 units

Perimeter $\rightarrow$ 1 + 4 + 4 + 1 + 4 + 4 = 18 units

18 units $\rightarrow$ 63 cm

1 unit $\rightarrow$ 63 ÷ 18 = 3.5 cm

AD = BC = 4 × 3.5 = 14 cm

AB = DC = 5 × 3.5 = 17.5 cm

Area of ABCD = AB × AD

= 17.5 × 14 = 245 cm^2

The area of ABCD is **245 cm^2**.

08. (C) Original langth be l and original breadth be b.

Given new $l = l - 5\%l$

$$= l - \frac{5}{100}l$$

$$= \frac{20l - l}{20}$$

$$= \frac{19l}{20}$$

similarly new $b = b + \frac{5}{100}\ b = \frac{216}{20}$

New area = $\frac{19l}{20} \times \frac{216}{20} = \frac{399}{400}\ lb$

Original area = lb.

Decreased area = $lb - \frac{399}{400}\ lb$

$$= \frac{400lb - 399lb}{400} = \frac{lb}{400}$$

$$\text{Decreased \%} = \frac{\frac{lb}{400}}{lb} \times 100$$

$$= \frac{100}{400}$$

$= 0.25$

09. (D) Given side of the square (S) = $8\frac{1}{3}$ cm = $\frac{25}{3}$ cm

$\therefore$ Area of the square = $S^2 = \left(\frac{25}{3}\text{cm}\right)^2$

$= \frac{25}{3}\text{ cm} \times \frac{25}{3}\text{cm}$

$= \frac{625}{9}\text{cm}^2$

$= 69\frac{4}{9}\text{cm}^2$

10. (A) Given 3a + 85° + 2a = 180° {$\because$ straight angle}

5a = 180° – 85°

$a = \frac{95°}{5} = 19°$

11. (C) Area of a rectangle

$= l \times b = (3x + 4)(3x - 2)\text{ cm}^2$

$=[3x(3x - 2] + 4(3x - 2)]\text{ cm}^2$

$= [9x^2 - 6x + 12x - 8]\text{ cm}^2$

$= (9x^2 + 6x - 8)\text{ cm}^2$

12. (D) Given $b = \frac{2}{3} l$

$2(l + b) = 240$ cm

$l + b = \frac{240}{2}$ cm

$l + \frac{2}{3} l = 120$ cm

$\frac{3l + 2l}{3} = 12$ cm

$5l = 120 \times 3$ cm

$l = \frac{120 \times 3}{5}$ cm

$l = 72$ cm

$\therefore b = \frac{2}{3} l = \frac{2}{3} l\ 72 = 48$ cm

Area = lb = 72 cm × 48 cm

= 3456 cm^2

13. (C) Given AB||DC

$\angle DAB + \angle ADC = 180°$ _____(1)

But given AD||BC

$= \angle BCD + \angle ADC = 180°$ _____(2)

from equation (1) & (2)

$\angle DAB + \angle ADC = \angle BCD + \angle ADC$

$\therefore$ $\angle DAB = \angle BCD$

But given $\angle DAB + \angle BCD = 230°$

$\angle DAB + \angle DAB = 230°$

[$\because$ $\angle BCD = \angle DAB$]

$2\angle DAB = 230°$

$\angle DAB = \frac{220°}{2} = 115°$

But $\angle DAB + \angle ABC = 180°$

$115° + \angle ABC = 180°$

$2ABC = 180° - 115° = 65°$

14. (C) The difference between the highest number and the lowest number of cell phones sold = 15 = (8 – 3) units = 5 units

$\therefore$ 1 unit = 3 cell phones,

$\therefore$ No. of cell phones sold on Thursday

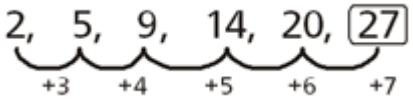
= 6 × 3 = 18

15. (A) $\frac{110.331}{72.611} \times \frac{3.157}{3.198}$

$= \frac{\cancel{1,10,331}^{\cancel{34.5}^{1.5}}}{\cancel{72,611}_{\cancel{23}}} \times \frac{\cancel{3157}}{\cancel{3198}} = 1.5$

REASONING

16. (B) The order of the letters of the first group is reversed and the middle small letter is replaced by a capital letter to obtain the second group.

17. (D) 

18. (B) The sector of outer circle moves ACW and sector of inside circle moves CW.

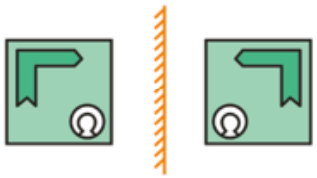
19. (B)

Letter	E	N	G	L	A	D	F	R	C
Code	1	2	3	4	5	6	7	8	9

Code for GREECE is 3 8 1 1 9 1

20. (C) 1A 2E 3U 4 5 8 7 D 9 Q 6 J I 7 K O

∴ Hence, three digits are followed by vowels in the given sequence.

21. (A) 

22. **(B)** 

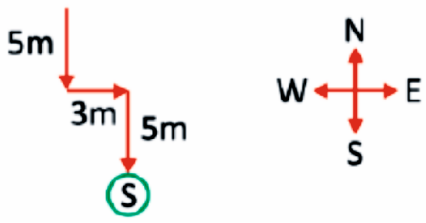
23. **(C)** Figures 3, 5, 8 contains 3 lines inside the figure.

Figures 1, 6, 9 contains 4 lines inside the figure.

Figures 2, 4, 7 contains 4 curved lines inside the figure.

24. (A) All others contain two consecutive letters in order.

25. (A) 1 5 2 6 5 2 5 1 9 5 1 3 5 6

26. (B) 

27. (D) $\sqrt{36}+\sqrt{49}+\sqrt{64}+\sqrt{25}=26$

$\sqrt{9}+\sqrt{25}+\sqrt{16}+\sqrt{81}=21$

Similarly

$\sqrt{25}+\sqrt{144}+\sqrt{36}+\sqrt{64}=31$

28. (C) SPIKE ELECTS

Hence the two new words are PIKE and ELECTS.

29. (B) The letters are consecutive letters with the prime number as the position value and the digits on either of the letter together indicate the place value of the letter

2W3 => W = 23, 1S9 => S = 19, 1Q7 => Q = 17, 1K1 => K = 11, Missing term is 1M3

30. (B) There are (25 – 11 – 1) = 13 boys between Akash and Nikhi.

COMPUTERS

31. (D) PASCAL, COBOL JAVA and BASIC are all high level languages. Machine & Assembly languages are low level languages.

32. (A) To convert any number into its binary form, divide it by 2 and track the remainder.

33. (C) A colon is used to seperate the cell addresses in spread sheet.

34. (D) All the given options are anti virus programs.

35. (D) JPEG stands for Joint photographic experts group.

36. (C) The structure of a function begins with an equal sign (=), followed by the function name, an opening parenthesis, the arguments for the function separated by commas, and a closing parenthesis.

37. (D) JanuaryFebruaryMarch

The semicolon (;) causes the computer to print the output without spaces.

38. (C) Numbers from 2 to 50, skip counting by 4

39. (A) When a file is sent to a remote computer, the process is called uploading.

40. (D) Operating system and application program.

41. (D) Both (B) and (C)

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

- 1) Compact disc → D

  A compact disc (CD) is a shiny circular storage disc, shown in image D.

- 2) Mouse → C

  A mouse is a pointing device used to control the cursor, shown in image C.

- 3) Barcode Reader → B

  A barcode reader is a device used to scan barcodes, shown in image B.

- 4) Floppy → A

  A floppy disk is a square-shaped old storage device, shown in image A.

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

44. (A) ctrl + shift + : is used to enter current time.

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

ENGLISH

46. (A) Aegis means protection or support.

Calamity means a disaster or serious event.

47 (A) Onto shows the relationship between the cat and the table, so it is a preposition.

48. (B) An odometer measures the distance travelled by a vehicle.

49. (D)

- P: “Nun” should be A nun
- R: “consouled” → consoled
- S: “past away” → passed away

50. (D) A collective noun names a group of people or things taken together.

- Rack – refers to a collection of items kept together (e.g., a rack of clothes) ( )
- Stack – refers to things piled, not a standard collective noun ( )
- Snack – a type of food ( )
- Wack – not a noun ( )

Hence, the correct answer is Rack.