



UNIFIED COUNCIL

An ISO 9001:2015 Certified Organisation



UNIFIED CYBER OLYMPIAD (UPDATED)

CLASS - 6

Question Paper Code : UC345

KEY

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

SOLUTIONS

MENTAL ABILITY

1. **(D)** The common difference between the divisors and the respective remainders = $(2 - 1) (3 - 2) = (4 - 3) = \dots = (8 - 7) = 1$
LCM of 2, 3, 4, 5, 6, 7 and 8 = 840
 \therefore Required number = $840k - 1$
Since the number lies between 1000 and 2000, $k = 2$
 \therefore Required number = $840 \times 2 - 1$
 $= 1680 - 1 = 1679$.
2. **(A)** Area of a photo = $12 \times 18 = 216$ sq. cm
Cost of frame per sq. cm = ₹ 1.20
 \therefore Cost of framing = $216 \times ₹ 1.20$
 $= ₹ 259.20$

3. **(A)** Two pairs of parallel lines
4. **(B)** If we multiply 2 (even number) negative integers, the answer will be positive integer.
eg:- $(-2) \times (-2) = 4$,
which is positive integer.
If we multiply 3 (odd number) negative integers, the answer will be negative integer,
eg:- $(-2) \times (-2) \times (-2) = -8$
which is negative integer.
 \therefore If we multiply 357 (odd number) negative integers together the answer will be in negative only.

If we multiply any number of positive integers together the answer will be in positive only.

\therefore we know that $(-) \times (+) = -$

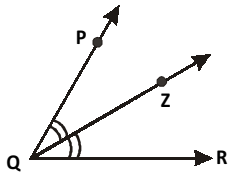
5. (B) Distance between X and A is greater than that between X and B.

6. (B) Given $a^3 = 216 \text{ cm}^3$
 $a^3 = 6 \text{ cm} \times 6 \text{ cm} \times 6 \text{ cm}$
 \therefore Side = $a = 6 \text{ cm}$.

7. (D) $60 \div 5 = 12$

8. (B) $1 + \frac{3}{2} = \frac{15}{9-x} \Rightarrow \frac{5}{2} = \frac{15}{9-x}$
 $9 - x = 6$
 $x = 3$.

9. (D) \overrightarrow{QZ} bisects $\angle PQR$ (Given)



Thus, $\angle P Q Z = \angle Z Q R = \frac{1}{2} \angle P Q R$.

10. (B) Areas ratio of P & Q = $4 : 9 = 4x^2 = 9x^2$

Given $4x^2 = 144 \text{ cm}^2$

$$x^2 = 36$$

$$x = 6$$

$$\therefore \text{Area of Q} = 9x^2 = 9 \times 36 = 324 \text{ cm}^2$$

Side of Q = 18 cm

Perimeter of = $4 \times 18 \text{ cm} = 72 \text{ cm}$

11. (B) Mahesh's marks

$$= (35 \times 5) - (5 \times 3)$$

$$= 175 - 15 = 160$$

$$\text{Suresh's marks} = (32 \times 5) - (8 \times 3)$$

$$= 160 - 24 = 136$$

Difference in the total marks obtained = $160 - 136 = 24$

12. (A) $103 \times 19261 = 1133 \times 1751$

13. (C) $(-3)^2 + [-(-3)(2)^2] - (-3)^2 (2)^2$

$$= 9 + 12 - 36 = -15$$

$$14. \text{ (B) } LHS = \frac{3}{2} \times \frac{4}{3} \times \frac{5}{4} \times \dots \times \frac{100}{99}$$

$$= \frac{100}{2} = 50$$

15. (C) Area of the pavement
 $= 2w(l + b - 2w)$
 $= 2 \times 3(18 + 18 - (2 \times 3))$
 (Here, $l = b = 18$)
 $= 180 \text{ sq. m}$

REASONING

16. (B) See number column wise.

$$7-5+4=6; 6-4+7=9; 5-1+3=7; 4-2+8=10$$

17. (D) Every number is multiplying by $\frac{-3}{2}$ sequentially.

18. (D) "M" is not the in the given word.

19. (B) 1,5,8; 2,4,9; 3,6,7

20. (A) RESSUR

21. (C) Here, the specified letter are T, E, R and A. The words made with the above letters are, TEAR and RATE

22. (C) TIGER

23. (D) The second and forth letters in the series, L and A, are static.

The first and third letters consist of an alphabetical order beginning with the letter E.

24. (B)

25. (C) $\frac{30}{105} = \frac{2}{7}$ similarly $\frac{26}{91} = \frac{2}{7}$

26. (B) The corresponding positions are changing like $1 \rightarrow 6, 2 \rightarrow 3, 3 \rightarrow 7,$
 $4 \rightarrow 8, 5 \rightarrow 2, 6 \rightarrow 4, 7 \rightarrow 5,$ and $8 \rightarrow 1$.

27. (B) The digits on either side of the letter in each of the groups 1P6, 2T0, and 1R8 indicate the place value of the letter in the alphabet.

This pattern is not followed by 2Y4.

28. **(D)** The sequence is a combination of two series: I. 19, 38, 114, (...) II. 2, 3, 4 The pattern followed in I is *2, *3, ... Missing number = $114 * 4 = 456$.

29. **(D)** The alphabets are reversing while the number is squared and then reversed.

30. **(A)** H is 8th letter

R is 18th letter

in between there are 9 letters. So 5th letter is our answer.

COMPUTERS

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|----------------|----------------|----------------|
| 31. (C) | 32. (A) | 33. (A) |
| 34. (B) | 35. (D) | 36. (B) |
| 37. (B) | 38. (D) | 39. (C) |
| 40. (C) | 41. (B) | 42. (B) |
| 43. (C) | 44. (A) | 45. (C) |

ENGLISH

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|----------------|----------------|----------------|
| 46. (B) | 47. (A) | 48. (A) |
| 49. (C) | 50. (B) | |

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The End
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