



UNIFIED COUNCIL

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NATIONAL LEVEL SCIENCE TALENT SEARCH EXAMINATION (UPDATED)

CLASS - 5

Question Paper Code : UN444

KEY

1. D	2. D	3. B	4. C	5. D	6. C	7. C	8. D	9. C	10. B
11. C	12. C	13. A	14. D	15. D	16. C	17. C	18. C	19. A	20. B
21. C	22. B	23. A	24. C	25. C	26. D	27. C	28. D	29. B	30. A
31. C	32. A	33. A	34. A	35. D	36. A	37. D	38. A	39. A	40. D
41. D	42. D	43. B	44. C	45. C	46. B	47. A	48. A	49. B	50. D
51. A	52. D	53. C	54. D	55. A	56. C	57. B	58. A	59. A	60. D

SOLUTIONS

MATHEMATICS

- (D)** HCF of 45 & 50 is 5
 $\therefore p = 5$
 $\therefore 180p + 100 = 180 \times 5 + 100$
 $= 900 + 100 = 1000$
- (D)** $x = 30,06,960$
 $y = 30,07,000$
 $y - x = 30,07,000 - 30,06,960 = 40$
- (B)** Factors of 40 are 1, 2, 4, 5, 8, 10, 20, 40
 $\therefore 40 \times 20 \times 10 \times 8 \times 5 \times 4 \times 2 = 25,60,000$
 $= 256 \times 10,000$

- (C)** $\frac{909000}{9090} = 100$
 $\therefore 159 - 100 = 59$
- (D)** 27 is the HCF of 81 & 108
Given $p + 3 = 27$
 $p = 24$
- (C)** $\frac{1}{9} + \frac{9}{2} = \frac{2+81}{18} = \frac{83}{18} = 4\frac{11}{18}$
- (C)** Given $3x - \frac{2}{3}x = 49$
 $\frac{7x}{3} = 49$

$$x = 49 \times \frac{3}{7} = 21$$

8. (D) $\frac{55 \text{ minutes}}{\left(2\frac{1}{4} \text{ hours}\right)} = \frac{55 \text{ minutes}}{135 \text{ minutes}} = \frac{11}{27}$

9. (C) $P = 6.5 + 0.13 = 6.63$

$$Q = 6.63 + 0.13 = 6.76$$

$$R = 6.76 + 0.13 = 6.89$$

$$\therefore P + Q - R = 6.63 + 6.76 - 6.89 = 6.5$$

10. (B) $2 \times 0.5 + \frac{9}{0.3} + 10 \times 0.92 = 1 + 30 + 9.2 = 40.2$

11. (C) Given $\frac{5^{\text{th}}}{7}$ of total people were in open

$$\therefore \frac{5^{\text{th}}}{7} \text{ of total people} = 15,000$$

$$\therefore \text{Total people} = 21,000$$

12. (C) 10% of ₹ 100 = ₹ 10

$$50\% \text{ of } ₹ 10 = ₹ 5$$

$$\therefore 10\% \text{ of } ₹ 100 > 50\% \text{ of } ₹ 10$$

13. (A) $(100 - 65 - 20)\%$ of total investment = ₹ 1200

$$15\% \text{ of total investment} = ₹ 1200$$

$$\therefore \text{Total investment} = ₹ 1200 \times \frac{100}{15} = ₹ 8000$$

14. (D) Pupils ratio of monday and saturday

$$= 48 : 120$$

$$= 2 : 5$$

15. (D) Vertex is the common end point of two rays

16. (C) Diameter is the longest chord

17. (C) Side \times side = 144 m²

$$\text{side} \times \text{side} = 12\text{m} \times 12\text{m}$$

$$\therefore \text{side} = 12 \text{ m}$$

18. (C) Given $4x + x = 90^\circ$

$$5x = 90^\circ$$

$$x = 18^\circ$$

19. (A) Given $4x + 7x = 99 \text{ kg}$

$$11x = 99 \text{ kg}$$

$$11x = 11 \times 9 \text{ kg}$$

$$x = 9 \text{ kg}$$

$$\text{Mamatha's mass} = 7x = 7 \times 9 \text{ kg} = 63 \text{ kg}$$

20. (B) Given perimeter = $2m = 200 \text{ cm}$

$$4s = 200 \text{ cm}$$

$$4s = 4 \times 50 \text{ cm}$$

$$s = 50 \text{ cm}$$

$$\text{Area} = \text{side} \times \text{side} = 50 \text{ cm} \times 50 \text{ cm}$$

$$= 2500 \text{ cm}^2$$

21. (C) $1\frac{1}{2} + \frac{3}{4} \times \frac{6}{3} \times 4 = \frac{3}{2} + 6 = \frac{15}{2} = 7\frac{1}{2}$

22. (B) Given length \times breadth = 120 q m

$$\text{lengths} \times 5 \text{ m} = 5\text{m} \times 24 \text{ m}$$

$$\text{length} = 24 \text{ m}$$

23. (A) $28.5 \times 7 - 27 \times 3 - 29 \times 3$

$$= 199.5 - 81 - 87 = 31.5^\circ\text{C}$$

24. (C) Height of coconut tree

$$= 2.14 \text{ m} \times 3 = 6.42 \text{ m}$$

$$\text{Height of banana tree}$$

$$= 6.42 \text{ m} - 0.25 \text{ m} = 6.17 \text{ m}$$

$$\text{Difference of height of banan tree \& guava tree}$$

$$= 6.17 \text{ m} - 2.14 \text{ m}$$

$$= 4.03 \text{ m}$$

25. (C) $\frac{17.28}{12} = 1.44$

$$3.6 \times 0.02 = 0.072$$

$$\therefore \frac{\left(\frac{17.28}{12}\right)}{3.6 \times 0.2} = \frac{1.44}{0.072} = \frac{1440}{72} = 20$$

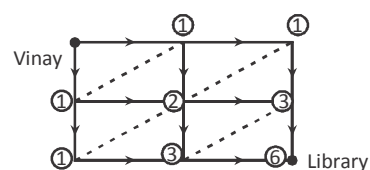
GENERAL SCIENCE

26. (D) Frogs are vertebrates.
27. (C) Vitamin D and Calcium are required by our bones to remain strong & healthy.
28. (D) Water does not stick to the surface of the leaves of lotus.
29. (B) Shelled terrestrial vertebrate animals are tortoises.
30. (A) Deciduous trees shed their leaves during winter.
31. (C) Friction is desirable on roads.
32. (A) An ant is an invertebrate arthropod with three pairs of jointed legs.
33. (A) Scurvy is NOT a communicable disease. It is a deficiency disease.
34. (A) When something is thrown at us unexpectedly, we close our eyes. This action depends on our nervous system
35. (D) TB, influenza and flu spread by air.
36. (A) WBCs of our blood release antibodies to fight against disease causing germs.
37. (D) Roots fixes the plant in soil.
38. (A) The part that grows first in an embryo is radicle.
39. (A)
40. (D) Grass - producer
Goat - herbivore
Tiger, snake and eagle are predators.
41. (D) Water vapour that condenses on the cold objects is called dew.
42. (D) Opposable thumb is found in Monkey which helps them in a special kind of movement.
43. (B) Spring of a clock possess mechanical energy.
44. (C) In gases the space between the molecules is more.
45. (C) Frog is an amphibian it breathes through lungs when it is on land and by skin when it is in water.
46. (B) Crocodile is a reptile reproduce by laying eggs. Bat, whale and zebra are mammals that reproduce by giving birth to young ones.

47. (A) Moringa (drumstick) seeds are dispersed by wind as they have wing like structures.
48. (A) Different places on the earth have different duration of days & nights. This happens because of the rotation of earth.
49. (B) Insects are the flying arthropods.
50. (D) Seeds require air, water and warmth to germinate and produces roots and a stem.
51. (A) Whale is a mammal that breathe through its lungs.
52. (D) The path followed by planets travelling around the sun is called orbit.
53. (C) The line that divides the earth into two equal halves equator.
54. (D) Mammals are vertebrates
55. (A) The mammal that can fly with ease is a bat.

CRITICAL THINKING

56. (C)
57. (B)



There are 6 different ways of Vinay to go to the library.

58. (A) BITE
59. (A)

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$$8 \diamond \rightarrow 32$$

$$\diamond \rightarrow 32 \div 8 = 4$$

$$\odot \rightarrow 3 \times 4 = 12$$
60. (D) In fig. (X), one of the dots lies in the region common to the circle and the square only and the other dot lies in the region common to all the three figures -the circle, the square and the triangle. In each of the alternatives (1), (2) and (3), there is no region common to the square and the circle only. Only fig. (4) consists of both the types of regions.