



# UNIFIED COUNCIL

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## NATIONAL LEVEL SCIENCE TALENT SEARCH EXAMINATION (UPDATED)

CLASS - 5

Question Paper Code : UN446

### KEY

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

### SOLUTIONS

#### MATHEMATICS

- (B)  $87,65,432 - 1,74,325 = 85,91,107$
- (A) 1000 is divisible by 8 which is the least 4 digit number
- (C) Prime numbers between 50 & 100 are 53, 59, 61, 67, 71, 73, 79, 83, 89, 97
- (C) Area of shaded region =  $4 \times 3 - \frac{1}{2} \times 4 = 10$
- (C)  $\therefore a \times \frac{1}{a} = 1$
- (A)  $\frac{180}{4} \times 9 = 405$
- (C)  $2.8 \text{ kg} \div 8 = 0.35 \text{ kg} = 350 \text{ g}$

- (D)  $\frac{1050 \text{ ml}}{6} = 175 \text{ ml}$
- (D)  $\text{₹ } 450 - \text{₹ } 450 \times \frac{1}{9} - \text{₹ } 450 \times \frac{2}{5} = \text{₹ } 220$
- (C)  $\frac{18}{0.3} = \frac{18}{3} = 60$
- (A)  $x + y + 38^\circ = 360^\circ$   
 $x + y = 322^\circ$   
 $x + x + 36^\circ = 322^\circ$   
 $2x = 286^\circ$   
 $x = 143^\circ$   
 $y = x + 36 = 179^\circ$

12. (D) 120% of previous salary = ₹ 3,000  
 $\frac{120}{100} \times \text{previous salary} = ₹ 3,000$   
 $\therefore$  Previous salary = ₹ 3,000  $\times \frac{100}{120} = ₹ 2500$
13. (D) As many as we want
14. (C) Length of each identical rectangle  
 $= \frac{12.5 \text{ cm}}{5} = 2.5 \text{ cm}$   
 $\therefore$  Perimeter of the given figure  
 $= (5 \times 2.5 + 12.5 + 10 \times 2) \text{ cm}$   
 $= (12.5 + 12.5 + 20) \text{ cm} = 45 \text{ cm}$
15. (A) Weight of each cake =  $\frac{48.36}{13} = 3.72 \text{ kg}$   
 weight of 20 cakes =  $3.72 \text{ kg} \times 20$   
 $= 74.40 \text{ kg}$
16. (C)  $2(2-1) - 2 = 2 - 2 = 0$
17. (B)  $\frac{12}{32} \times 100 = 37.5$
18. (C)  $\frac{1}{2} \times \frac{4}{5} \times 1,250 \text{ ml} = 500 \text{ ml}$
19. (C)  $118^\circ + \angle g = 180^\circ$ ,  $\angle g = 62^\circ$
20. (C)  $\frac{3}{4} \text{ KM} + \frac{3}{8} \text{ KM} + \frac{7}{8} \text{ KM} = \frac{16}{8} \text{ KM} = 2 \text{ KM}$
21. (D)  $130 \text{ m}^2 = 5 \text{ m} \times \text{length}$   
 $\text{length} = \frac{130}{5} \text{ m} = 26 \text{ m}$
22. (C) 0.019 is greatest
23. (A) Box weight + full of bultons mass = 2 kg  
 Box weight +  $\frac{1}{3}$  full of bultons mass = 800g  
 $\therefore \frac{2}{3}$  boltions mass = 1 kg 200 g  
 $\frac{1}{3}$  boltions mass = 600 g  
 full boltions mass = 1800 g  
 Box mass = 2 kg - 1800 g = 200 g
24. (A)  $37 - 23 = 14$
25. (B) Breadth of shaded area =  $8 \text{ cm} - 6 \text{ cm}$   
 $= 2 \text{ cm}$

Area of shaded part =  $6 \times 2 = 12 \text{ cm}^2$   
 Area of unshaded area =  $36 \text{ cm}^2$   
 Fraction of shaded area and unshaded area =  $\frac{12 \text{ cm}^2}{36 \text{ cm}^2} = \frac{1}{3}$

### SCIENCE

26. (A) Fossils are petrified remains of prehistoric plants and animals.
27. (B) Solar eclipse occurs when moon comes between the earth and sun.
28. (A) Heart is a pumping organ.
29. (C) Crack in a bone is called a fracture.
30. (A) At state IV a sapling can make its own food.
31. (B) Whale is a mammal, that give birth to youngones.
32. (D) Part A is gill chamber, they take in oxygen from the water that flows over them, they are made up of comb-like filaments to increase the surface area for gaseous exchange, they are kept inside a chamber filled with water to prevent them from drying up.
33. (C) Earthworms are called as farmer's friend.
34. (C) K is ribcage, L is lungs.
35. (C) Salt is obtained by evaporation from sea water.
36. (D) Soil is formed when large rocks of the surface of earth breakdown into smaller pieces by the action of natural agents like rain, wind and water.
37. (C) Water vapour is lighter than the surrounding air, hence it rises upwards.
38. (B) Snakes and worms living inside the soil come on to the land during rains, this is because to breathe.
39. (B) A girl is playing jumping rope, no matter how high the girl jumps, she always lands back on the ground because of earth's gravity.
40. (A) Starch is not produced in the absence of chlorophyll.

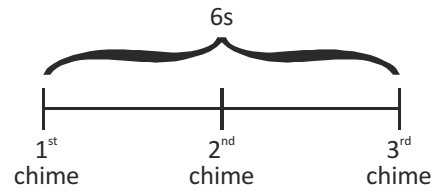
41. (B) Sedimentary rock is made up of sand particles.
42. (D) Younger people breathe faster than older people.
43. (D) When moon is between the sun and earth new moon phase of lunar cycle occurs.
44. (C) Water, air and sunlight are non-living factors needed by plants to make food.
45. (A) Wheel and axle is an example of pulley.
46. (C) To conserve natural resources, plant trees to replace ones that are cut down.
47. (B) If we add a lot of green leaves and vegetables to our food, we will grow healthy and disease free.
48. (C) The best way to dispose waste water from kitchen is to used for watering plants.
49. (D) Flowers produce fruits, if all the flowers are removed mango tree cannot produce mangoes.
50. (A) Lungs are the parts of respiratory system.
51. (B) Coconut seeds are dispersed by water.
52. (D) Plastic cup is non-biodegradable. It remains same.
53. (B) A rabbit eating a carrot is a consumer eating a producer.
54. (D) Caterpillars found on the leaves of plants become less visible to their predators.
55. (B) Cactuses store wtaer in the stems.

### CRITICAL THINKING

56. (A)

1	2	3	4	5
Q	T	R	P	S

57. (A)



$$6 \text{ s} \div 2 = 3 \text{ s}$$

Each interval 3 s.

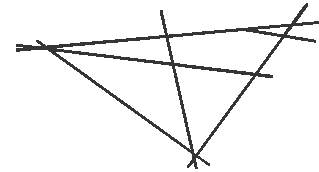
$$6 - 1 = 5 \text{ intervals}$$

$$5 \times 3 \text{ s} = 15 \text{ s}$$

It takes 15 s to chime 6 times at 6 o'clock.

58. (B)

AB, BC, CD, DE, AC, BD, CE, AD, BE, AE.  
There are 10 lines of different lengths



59. (B)

Sparrow, Pigeon, Peacock, Ostrich

60. (A)

Number of rectangles formed by

$$1 \text{ } \boxed{\phantom{00}} = 7$$

$$2 \text{ } \boxed{\phantom{00}} \text{ s} = 6$$

$$3 \text{ } \boxed{\phantom{00}} \text{ s} = 3$$

Total number of rectangles = 16

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**THE END**

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