



**NATIONAL LEVEL SCIENCE TALENT SEARCH EXAMINATION (UPDATED)**

**CLASS - 4**  
**Question Paper Code : 1P104**





**KEY**

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

**SOLUTIONS**

**MATHEMATICS**

01. (D) 61 is a prime number.

02. (A)  because the other number is  obtained by dividing the product  by the known number .

03. (D) The diagonals are equal.

04. (D) Option (A) :  $6875 - 4213 = 2662$  (Even)  
Option (B) :  $1648 + 6742 = 8390$  (Even)  
Option (C) :  $54 \times 357 = 19278$  (Even)  
Option (D) :  $252 \div 12 = 21$  (Odd)

05. (A) Container X =  $56\text{ l}$   
container Y =  $56\text{ l} - 7\text{ l} = 49\text{ l}$   
container Z =  $49\text{ l} + 14\text{ l} = 63\text{ l}$

06. (C) 5 is a factor of 45 and not a multiple of 3




07. (A)  $S = T$  because if  $S - 100 = T - 100$ , adding 100 to both sides gives  $S = T$

08. (B)  $1070\text{ g} = 1\text{ kg } 70\text{ g}$

09. (B) Roman numeral for 999 is CMXCIX

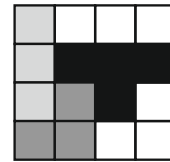
10. (C) (A) : 30 thousands =  $30 \times 100 = 3000$   
(B) : 3000 ones =  $3000 \times 1 = 3000$   
(C) : 30 thousands =  $30 \times 1000 = 30000$   
(D) : 300 tens =  $300 \times 10 = 3000$

## GENERAL SCIENCE

11. (D) Using only the given digits 689 is the largest 3 - digit odd number between 200 and 800.
12. (A)  $\text{Dividend} = (\text{Divisor} \times \text{Quotient}) + \text{Remainder}$   
 $= (30 \times 16) + 20$   
 $= 480 + 20 = 500$
13. (B)  $\frac{2}{3} \times \frac{2}{2} = \frac{4}{6}$
14. (B)  $888 \div 6 = 37 \times 4$   
 $148 = 148$
15. (C) In the Roman numeral system, the symbols V, L and D cannot be repeated. Only the numerals I, X, C and M can be repeated.
16. (C)   $>$    
 $1500 \text{ gm} > 1300 \text{ gm}$
17. (A)  $1 \text{ m} = 100 \text{ cm}$   
 $100 \text{ cm} - 45 \text{ cm} = 55 \text{ cm}$
18. (B)  $28 \times 7 = 196$
19. (A) 
20. (A) The page numbered 10, 20, 30, 40, 50, 60, 70, 80, 90, 100. (10 pages total were removed). After counting the digits in the remaining pages, there are 171 digits left.  
Total number of digits from 1 to 100 is 192  
 $192 - 21 = 171$
21. (D)  $\overrightarrow{EF}$  is a line not a ray.
22. (A)  $\frac{1}{6} + \frac{1}{6} = \frac{2}{6} = \frac{1}{3}$
23. (A) Perimeter of square is  $= 12 \text{ cm} \times 4 = 48 \text{ cm}$   
Perimeter of square = perimeter of rectangle  
 $\therefore$  Perimeter of rectangle = 48 cm  
 $2(l \times b) = 48 \text{ cm}$   
 $2(l + 16 \text{ cm}) = 48 \text{ cm}$   
 $l = 24 \text{ cm} - 16 \text{ cm}$   
 $l = 8 \text{ cm}$
24. (B)  $14 \times 3 = 42 \text{ m}$
25. (C) Capacity of jug =  $405 \times 4$   
 $= 1620 \text{ ml} = 1 \text{ l } 620 \text{ ml}$
26. (D) The given figure is of a tooth and X is enamel which is the outer hard covering of the tooth.
27. (C) Insectivorous plants are found in areas where the soil is nutrient deficient. So, they catch and digest insects to fulfill their nutrient requirement.
28. (B) A pulley is a simple machine that has a grooved wheel and a rope running between the groove of the wheel. It is used to lift heavier objects easily. In the given picture, the man is pulling a bucket full of water from the well with the help of a pulley.
29. (D) In the given figure P, Q, R and S represent belly, legs, tail and hump respectively of a camel. Hump stores fat which can be used during shortage of food.
30. (C) X is Venus which is also called evening star, Y is Moon and Z is Jupiter.
31. (B) Air contains nitrogen (78%), oxygen (21%) and carbon dioxide and other gases (0.03%). So, X, Y and Z could be nitrogen, oxygen and carbon dioxide respectively.
32. (A) Water affects friction. Water can create a smooth layer between two surfaces (e.g., the floor and the sole of a shoe) by filling in any gaps or holes in the rough surface. Molecules in a liquid slide past each other more easily than particles in a solid, thus providing lubrication. This reduces the amount of friction objects would normally experience as one rough surface rubs against another rough surface.
33. (D) Iron helps in the formation of blood vitamin C is present in citrus fruits that helps to keep gums healthy and Z is roughage that helps to remove wastes from the body.
34. (A) Animals live in groups in search of food.
35. (C) Sheep, cow and rabbit are herbivores while bear is an omnivore.
36. (B) Humus  $\rightarrow$  (IV) , Topsoil  $\rightarrow$  (II), Subsoil  $\rightarrow$  (III), Bedrock  $\rightarrow$  (I).

37. (B) Tetanus is due to the entry of germs through cut skin.
38. (C) P - Water, Q - Food, R - Carbon dioxide, S - Oxygen
39. (A) Shedding of outer covering or olden covering or skin is called moulting.
40. (B) 2, 4, 5, 3, 1
41. (C) Woollen blanket traps body heat and keeps body warm during winter.
42. (B) Earth is the third planet. It supports life as it has air and water.
43. (D) The gullet is present in between the mouth and stomach.
44. (A) Plants make their food in the presence of sunlight taking in water from the soil and carbon dioxide from the air.
45. (B) Growth and development occur in the life span of all animals.
46. (A) Insect 'X' is butterfly.
47. (D) A ball falls to the ground when it is thrown up into the air is due to gravitational force of earth.
48. (D) Frog has two types of respiratory systems : Lungs and skin.
49. (C) Starch turn to blue black due to the addition of iodine.
50. (C) Rotation of earth on its axis causes day and night.
51. (D) Part labelled X are breathing roots.
52. (B) Pitcher plant is an insectivorous plants.
53. (B) Some animals hibernate in the winter to adapt to environmental changes.
54. (A) Substance X is carbondioxide, Substance Y is glucose and Substance Z is oxygen.
55. (D) Leaves are green due to the presence of a green pigment called chlorophyll. The main function of chlorophyll is to trap the sunlight and help in photosynthesis.

### CRITICAL THINKING



56. (D)

57. (D)  $8 + \diamond = 15$

$$\diamond = 15 - 8 = 7$$

$$\diamond \diamond = 7 + 7 = 14$$

58. (A) Nancy had 4 flowers and 3 vases.

Let  $x$  be the number of flowers, and  $y$  be the number of vases.

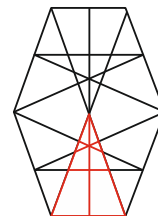
$$x - y = 1 \text{ or } y = x - 1$$

From the statement "if she put two flowers per vase, she had one vase empty", we get

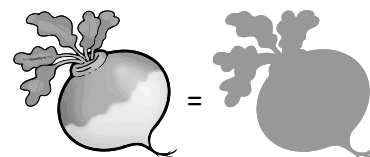
$$2(y - 1) = x \text{ or } 2(x - 1 - 1) = x \text{ (putting the value of } y \text{ from equation 1) or } 2x - 2 - 2 = x \text{ or } 2x - x = 4 \text{ or } x = 4$$

$$\text{Hence, } y = 3$$

Thus, Nancy had 4 flowers and 3 vases.



59. (B)



60. (C)