



NATIONAL LEVEL SCIENCE TALENT SEARCH EXAMINATION (UPDATED)

CLASS - 4
Question Paper Code : UN489

KEY

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

SOLUTIONS

MATHEMATICS

01. (A) From 1 to 30, the digit 2 appears 13 times i.e., 2, 12, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29.

02. (D) $4 \star = 48$

$$\star = 48 \div 4 = 12$$

$$\text{then } 6 \star = 6 \times 12 = 72$$



No. of right angles in a square = 4

04. (C) 1 whole = 12 twelfths
3 whole = $12 \times 3 = 36$ twelfths

05. (D) _____ - 20 < 24×5

_____ - 20 < 120

$139 - 20 < 120$

$119 < 120$

06. (A) $5 \times 5 \times 5 \times 5 = 5 \times 15 + \text{_____} \times 5$

$625 = 75 + \text{_____} \times 5$

_____ $\times 5 = 625 - 75$

_____ $\times 5 = 550$

_____ = $550 \div 5 = 110$

07. (B) $68 \text{ min} + 2 \text{ h } 4 \text{ min}$
 $= 60 \text{ min} + 8 \text{ min} + 2 \text{ h } 4 \text{ min}$
 $= 1 \text{ h} + 8 \text{ min} + 2 \text{ h } 4 \text{ min}$
 $= 3 \text{ h } 12 \text{ min}$
 $= 180 \text{ min} + 12 \text{ min}$
 $= 192 \text{ min}$

08. (B)



1 unit \rightarrow ₹58

5 units \rightarrow ₹58 \times 5 = ₹290

They have ₹290 altogether.

09. (D) 37 minutes past 7

10. (C) 5 minutes = 120 words

1 minute = $120 \div 5 = 24$ words

In 3 minutes = $24 \times 3 = 72$ words

11. (C) Length of a rope = 285 m

Length of the rope used = 225 m

= $285 \text{ m} - 225 \text{ m} = 60 \text{ m}$

Mona cutted remaining rope into 5 equal parts

= $60 \text{ m} \div 5 = 12 \text{ m}$

Length of each rope = 12 m.

12. (B) No. of markers in each bundle = 8

Cost of each bundle = ₹3

Amount received by selling all the markers = ₹45

No. of bundles he sold = $₹45 \div 3 = 15$

No. of markers bought = $15 \times 8 = 120$ markers.

13. (B) (A) 320 cm

(B) $3 \text{ m } 2 \text{ cm} = 302 \text{ cm}$

(C) $23 \text{ m} = 2300 \text{ cm}$

(D) $9 \text{ m } 440 \text{ cm} = 1340 \text{ cm}$

14. (A) (A) $DCLX = 500 + 100 + 50 + 10 = 660$

(B) $CDXL = (500 - 100) + (50 - 10)$
 $= 400 + 40 = 440$

(C) $DCXL = 500 + 100 + (50 - 10)$
 $= 600 + 40 = 640$

(D) $CDCX = (500 - 100) + (100 + 10)$
 $= 400 + 110 = 510$

15. (A) A. $9 \times 3 = 27$

B. $4 \times 5 = 20$

C. $3 \times 7 = 21$

D. $6 \times 4 = 24$

16. (A) $\frac{1}{5} + \frac{1}{3} = \frac{3}{15} + \frac{5}{15}$

= $\frac{8}{15}$ (Spent)

$1 - \frac{8}{15} = \frac{15}{15} - \frac{8}{15}$

= $\frac{7}{15}$

17. (C) (A). $\frac{1 \times 5}{2 \times 5} = \frac{5}{10}$

(B) $\frac{3 \times 2}{5 \times 2} = \frac{6}{10}$

(C) $\frac{4 \times 2}{5 \times 2} = \frac{8}{10}$

(D) $\frac{2 \times 2}{5 \times 2} = \frac{4}{10}$

18. (D) Quantity of orange juice each student drank = $250 \text{ ml} \times 2 = 500 \text{ ml}$

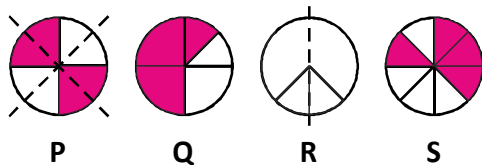
$6 + 2 = 8$

$500 \text{ ml} \times 8 = 4000 \text{ ml} = 4 \text{ l}$

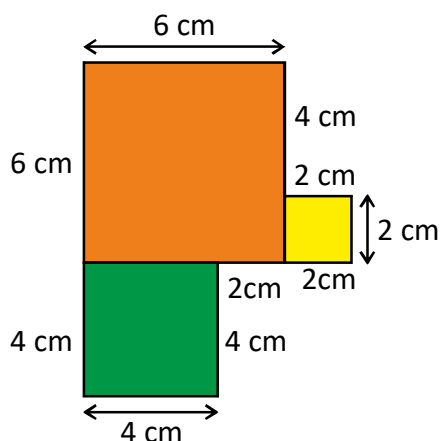
19. (A) $996 \text{ g} + 428 \text{ g} + 332 \text{ g} = 1756 \text{ g}$

$1756 \times 5 = 8780 \text{ g}$ (or) $8780 \div 5 = 1756$

20. (D) Cost of 5 pears = ₹30
 1 pear = ₹30 ÷ 5 = ₹6
 Cost of 20 pears = 20 × ₹6 = ₹120
 Cost of 1 bunch of bananas = ₹20
 3 bunches = ₹20 × 3 = ₹60
 Total = ₹120 + ₹60 = ₹180
21. (A) 1 round = 624 m
 6 rounds = 624 m × 6 = 3744 m
 She wants to run total distance of 4368m.
 No. of more rounds she can run = 4368m
 – 3744 m = 624 m
 = 1 round.
22. (C) Largest 4-digit number = 9999
 9999 ÷ 3 = 3333
23. (C) Circles P and R have lines of symmetry but circles Q and S do not



24. (C) Value of 7 = 700
 Value of 5 = 50000
 Difference = 50000 – 700
 = 49300
25. (D) Perimeter of the figure
 = 6 cm + 6 cm + 4 cm + 4 cm + 4 cm + 4 cm + 2 cm + 2 cm + 2 cm + 2 cm = 36 cm

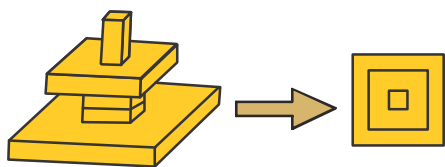


GENERAL SCIENCE

26. (C) Sheep, cow and rabbit are herbivores while bear is an omnivores.
27. (A) Ringworm is caused by fungi, whereas dysentery and malaria are caused by protozoa and measles is caused by virus.
28. (B) The plant is responding to sunlight.
29. (B) Fog is the vapour that condense into tiny droplets that are suspended near the ground.
30. (C) Rain, snow and sleet are forms of precipitation.
31. (C) The roots of mangrove plants do not get enough air as water replaces air in the soil pores and roots get suffocated. So, the roots grow out of soil to help the plant to breathe.
32. (A) Pine tree is an evergreen tree that grow in hilly areas. It is a tall and conical tree and has needle-shaped leaves.
33. (A) Energy is given off in many forms. All objects always emit some radiation (energy). At room temperature or below, the amount of energy given off is minimal. Only at much higher temperatures is the energy of the radiation (light) sufficient to make it visible. When the wick of the candle burns, it produces the visible light energy and heat (the transfer of thermal energy from one substance to another).
34. (A) P - ii; Q - iv; R - i; S - iii
35. (B) Roughage is a dietary fibre present in vegetables and fruits that cannot be digested. It adds bulk to the food and helps in the removal of waste materials from the body.
36. (C) 1 : Nitrogen; 2 : Oxygen; 3 : Other gases
37. (A) Saliva in the mouth acts on starch and converts it into simple sugars.
38. (A) Squirrel is a mammal. It gives birth to young one.

39. (B) When food enters the mouth, it is mixed with saliva and broken down into smaller pieces. It is then pushed down the gullet, into the stomach. The stomach produces gastric juices to break down the food into simpler substances. After a few hours, the food goes into the small intestine. The intestine secretes intestinal juices to further break down the food. Digestion is completed in the small intestine. The digested food passes into the bloodstream in the small intestine. The undigested food goes into the large intestine and water is removed. The solid waste is passed out of the body through the anus.
40. (C) At each joint is a node. Nodes are points where the leaves grow. The stem is filled with vascular bundles and stores sugar. The stem of the sugar cane is known as the cane. The main product is the sugar contained within it. The roots of the sugar cane take in water and its leaves enable it to make food. The flowers are for the reproduction of new sugar cane plants.
41. (D) The leaves use the sunlight and water to make food for the tree. Hence, more leaves are found at the top of the tree in order to obtain more sunlight.
42. (Delete)
43. (A) Rotation of earth causes day and night.
44. (A) Hydro energy : Water :: Solar energy : Sun
45. (A) If you breathe on a mirror, the mirror steams up... When the water vapor from your breath hits the cold mirror, some of it turns into a liquid. Thousands of tiny droplets of water form on the mirror, and this is called condensation.
46. (B) A seed sprouting is a stage in plant life cycle.
47. (C) The sharp spines on the cactus help it to keep animals away from the plant.
48. (B) Leaves produce the food for plant leaves are called kitchen of the plant.
49. (D) It is condensed from the water vapour in air.
50. (A) Cockroach young one undergoes moulting to form into an adult.
51. (D) Trees provide food, shelter and clean air to the birds and animals.
52. (A) Plants in option (A) is sundew an insectivorous plant, that grow in nutrition deficient soil. Hence, it eats insects and also can make its own food.
53. (C) Canine teeth are used to tear its food into shreds.
54. (D) Topsoil has more humus. Hence, it is easier to grow plants healthy in topsoil than in subsoil.
55. (A) Insect X is Butterfly.

CRITICAL THINKING

56. (C) Option (A) : *Nivika*
 Option (B) : *Neelima*
 Option (C) : *Nainika*
 Option (D) : *Nirmala*
57. (B) Total number of students are 26
 If 26 divided by 4 remainder is 2
 If 26 is divided by 5 remainder is 1
 Given that 15 students are girls. So,
 $26 - 15 = 11$
 Therefore boys are 11
58. (C) 
59. (B) As there are 7 days in a week, in a period of 8 consecutive days, 1 day which is the first day will be repeated on the 8th day
 Since Monday is repeated therefore the first day is Monday. And the days after that are Tuesday, Wednesday, Thursday and so on
 Therefore Option (B) that Wednesday is the third day of the period is correct

60. (B) The series of cars

1 2 3 4 5

Step 1: last car over total the two front car

1 2 5 3 4

Step 2: second to last car overtakes the two in front of it

1 3 2 5 4

Step 3: The car in the middle overtakes the two in front of it

2 1 3 5 4

=====*The End*=====