



NATIONAL LEVEL SCIENCE TALENT SEARCH EXAMINATION (UPDATED)

CLASS - 5
Question Paper Code : UN470

KEY

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

SOLUTIONS

MATHEMATICS

01. (A) $\frac{7}{10} - \frac{2}{5} + \frac{1}{2} = \frac{7}{10} - \frac{4}{10} + \frac{5}{10}$
 $= \frac{8}{10} = \frac{4}{5}$

02. (D) 1 million – 100 thousands
 $= 1000000 - 100000$
 $= 900000$

03. (B) 1 h + 15 min = 75 min
Duration on watch Actual duration
 75 min → 1 h

1 min → $\frac{60}{75}$ min = $\frac{4}{5}$ min

120 min → $\frac{4}{5}$ min × 120

= 96 min = 1 h 36 min

2 pm $\xrightarrow{1\text{h } 36\text{ min}}$ 3.36 pm

3.36 pm = 15:36

04. (D) $1 - \frac{2}{5} = \frac{3}{5}$

$\frac{3}{5} \div 4 = \frac{3}{5} \times \frac{1}{4} = \frac{3}{20}$

05. (B) Bees : Butterflies

$$= 60 \div 15 : 45 \div 15$$

$$= 4 : 3$$

06. (C) $\frac{3}{13}$ [Tip : Divide one big square into 4 equal small squares]

07. (B) Area of triangle ACD = $\frac{1}{2} \times 14 \times 6$

$$= 42 \text{ cm}^2$$

08. (D) 5 kg = 5 × 1000

$$= 5000 \text{ g}$$

09. (D) The smallest 3 digit odd number is 101

The biggest 1 digit even number is 8

$$X = 101 \times 10 + 8$$

$$= 1010 + 8$$

$$= 1018$$

10. (C) $12 + 20 \div 4 \times 8 - 2 = 50$

Using DMAS rule

$$12 + 5 \times 8 - 2 = 50$$

$$12 + 40 - 2 = 50$$

$$40 + 10 = 50$$

$$50 = 50$$

11. (C) $500 - 74 = 426$

$$426 \div 3 = 142$$

12. (B)



Total number of pictures painted by Charan and Manish

$$\rightarrow 123 \div 3 = 41$$

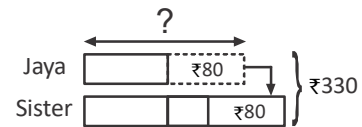
Number of pictures painted by Manish

$$\rightarrow 41 - 27 = 14$$

$$\text{Difference} \rightarrow 123 - 14 = 109$$

Tanish painted 109 pictures more than Manish

13. (D)



$$3 \text{ units} \rightarrow ₹330$$

$$1 \text{ unit} \rightarrow ₹330 \div 3 = ₹110$$

Amount of money Jaya had at first

$$= ₹110 + ₹80 = ₹190$$

14. (A)

Number of non-flowering plants

$$= 125 - 75 = 50$$

Percentage of the plants that were non-flowering

$$= \frac{50}{125} \times 100\% = 40\%$$

15. (A)

Difference between Sachin and her sister's ages

$$= 18 - 15 = 3 \text{ years}$$



$$2 \text{ units} \rightarrow 51 - 3 = 48 \text{ years}$$

$$1 \text{ unit} \rightarrow 48 \div 2 = 24 \text{ years}$$

Sachin will be 24 years old

16. (D)

Number of teams of 3 girls and 2 boys

$$\rightarrow 30 \div (3 + 2)$$

$$= 3 \div 5 = 6$$

$$\text{Number of boys} \rightarrow 6 \times 2 = 12$$

17. (B)

$$360^\circ - 124^\circ - 126^\circ = 110^\circ$$

$$4 \text{ units} + 1 \text{ unit} = 5 \text{ units}$$

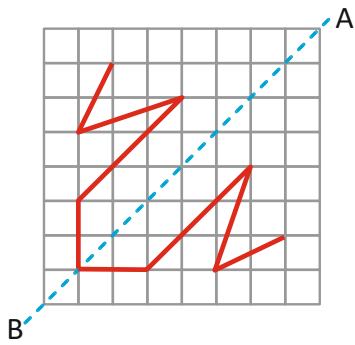
$$5 \text{ units} \rightarrow 110$$

$$1 \text{ unit} \rightarrow 110 \div 5 = 22$$

$$4 \text{ units} \rightarrow 4 \times 22 = 88$$

$$\angle AOB \text{ is } 88^\circ$$

18. (C)



19. (D) A certain number has exactly 3 different factors. If the second greatest factor is 7, the number is 49 and the sum of its digits is 13

20. (C) Amount given by Rohan's mother = ₹ 300
% of money spent on stationery and eatables

$$= 15\% + 35\% = 50\%$$

The % of amount saved

$$= \text{Remaining \%} = (100 - 50)\% = 50\%$$

∴ Amount saved by Rohan

$$= 50\% \text{ of ₹ } 300$$

$$= \frac{50}{100} \times ₹ 300 = ₹ 150$$

21. (A) The given figure becomes a cuboid if it has $4 \times 3 \times 2 = 24$ cubes

The no. of cubes in the given figure = 11

∴ The no. of cubes that must be added to make it a cuboid = $24 - 11 = 13$

$$\text{Hence, its volume} = 13 \times 2 \times 2 \times 2 \text{ cm}^3 = 104 \text{ cm}^3$$

22. (B) After 10 hours, the time would be 2 o'clock

In 12 hours, the hour hand moves through 360°

∴ For 10 hours, the hour hand moves through

$$\frac{360^\circ}{12} \times 10 = 300^\circ$$

23. (B) $28 \text{ sevenths} = 28 \times \frac{1}{7} = 4$

$$9 \text{ one-quarters} = 9 \times \frac{1}{4} = \frac{9}{4} = 2\frac{1}{4}$$

$$\text{Difference} = 4 - 2\frac{1}{4} = 1\frac{3}{4}$$

$$10 - 1\frac{3}{4} = 9\frac{4}{4} - 1\frac{3}{4} = 8\frac{1}{4}$$

The difference is $8\frac{1}{4}$ less than 10

24. (D) In evaluation of a numerical expression, division (D), multiplication (M), addition (A) and subtraction (S) have to be performed in order

25. (A) Number of apples with Riyan = IX = 9

Number of apples with Jai

$$= XXX + IX = 39$$

GENERAL SCIENCE

26. (D) Brain is the controlling centre of the body.

27. (A) Phases of the moon occur because we can see only the part of the moon which reflects light towards us

28. (C) Cotyledons or seed leaves supply food, radicle forms the root and plumule forms leaves and stem.

29. (B) Aquatic plants release oxygen for the fishes to breathe and also removes carbon dioxide.

30. (B) Heat, light and electricity are all forms of energy.

31. (C) Ginger is the stem part of the plant. A stem has nodes and internodes on it.

32. (B) All these animals are adapted to fly.

33. (A) Igneous rocks that are formed due to earth's heat, they are called fiery rocks.

34. (B) Cotyledon supplies food to the developing embryo.

35. (C) Salt is separated from salt water by evaporation.

36. (A) The changes to the land shown in the diagram were most likely caused by erosion and deposition.
37. (D) A tiger uses its canines to hold onto its prey and kill it. The tiger stabs its prey with the canines and rips the meat.
38. (D) Goitre is a deficiency disease.
39. (B) Oxygen, nitrogen and hydrogen are all gases.
40. (D) Ball and socket joint allows the movement in 360° degrees or as a circle.
41. (A) Lever in which the fulcrum is located between the load and the effort is I class lever.
42. (D) The arrangement of veins on a leaf are is called venation. In dicots the venation is reticulate and in monocots it is parallel.
43. (B) Tadpole breathe through gills. A tapole is a larva of frog it resembles fish and breathe through gills.
44. (D) They all are simple machines.
45. (C) In desert plants stem is modified in the form of fleshy leaves that helps them to make food.
46. (D) In a hydropower station, electricity is produced by using running water.
47. (D) Plastic is non-biodegradable substance which on burying in wet ground remains the same even after several years.
48. (A) Change in colour of fur from dark to white help a fox to camouflage.
49. (B) Lunar eclipse occurs on a full moonday.
50. (C) Animals with backbone are called vertebrates.
51. (A) At the stage four the bean sapling make food when there is sunlight.
52. (A) Hinge joint allows movement in only one direction. The movement is similar to the movement of a door on its hinges.
53. (B) Head, thorax, abdomen are parts of insects.
54. (C) The given fruit has hooks which get stuck to the skin of animals and get dispersed.
55. (B) Water and wind can break rock into small pieces they become part of the soil.

CRITICAL THINKING

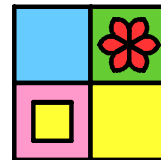
56. (C) Nov 14th ⇒ Thursday

November has 30 days.

$$\text{Nov 30 will be } \frac{30-14}{7} \Rightarrow \frac{16}{7} \Rightarrow 2,$$

2 odd days.

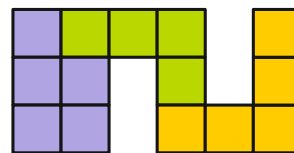
Hence November 30 is Saturday.



57. (A)

58. (A) Cause : Out apartment is on the 11th floor

Effect : Therefore, we have a great view of the city



59. (B)

60. (D)

