



**NATIONAL LEVEL SCIENCE TALENT SEARCH EXAMINATION**

**CLASS - 5**

**Question Paper Code : UN484**

**KEY**

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

**SOLUTIONS**

**MATHEMATICS**

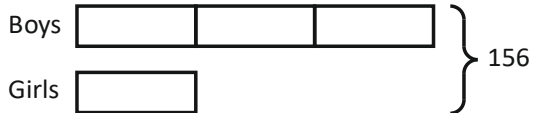
01. (C)  $5.65 + 0.005 = 5.655$   
 $5.655 + 0.005 = 5.660$   
 $5.660 + 0.005 = 5.665$
02. (C) Time taken by Meena to sew 8 buttons  
= 7 min 20 s  
=  $60 \times 7 + 20 = 420 + 20 = 440$  s  
Time taken to sew for 1 button  
=  $440 \div 8 = 55$  s
03. (A)  $6.3 + 8.025 = 14.325$

04. (C) No. of marbles with Ali = 826  
No. of marbles Ali gave to his brother =  
 $826 - 371 = 455$   
Left marbles shared among 5 friends =  
 $455 \div 5 = 91$   
Each boy will get = 91 marbles.
05. (D) Perimeter of figure A =  $28\text{ m} + 22\text{ m} + 28\text{ m} + 17\text{ m} = 95\text{ m}$   
Perimeter of figure B =  $22\text{ m} + 22\text{ m} + 26\text{ m} + 22\text{ m} + 26\text{ m} = 118\text{ m}$   
Total perimeter =  $118\text{ m} + 95\text{ m} = 213\text{ m}$

06. (A)  $2\text{ l } 400\text{ ml} \div 2 = 1\text{ l } 200\text{ ml}$   
 $= 1200\text{ ml}$   
 The amount of water in the jug is  $1200\text{ ml}$   
 $1200\text{ ml} \div 4 = 300\text{ ml}$   
 The capacity of each glass is  $300\text{ ml}$   
 The total capacity of 5 such glasses is  $1\text{ l } 500\text{ ml}$ .  
 $5 \times 300\text{ ml} = 1500\text{ ml} = 1\text{ l } 500\text{ ml}$

07. (C)  $200 - 32 = 168$   
 The baker had 168 apple pies left.  
 $168 \div 4 = 42$   
 The baker had 42 boxes of apple pies.  
 $42 \div 3 = 14$   
 He had 14 sets of 3 boxes  
 $14 \times ₹5 = ₹70$   
 He collected ₹70

08. (A)



4 units  $\rightarrow 156$   
 1 unit  $\rightarrow 156 \div 4 = 39$   
 3 units  $\rightarrow 3 \times 39 = 117$   
 There are 117 boys in the swimming pool

09. (B) Age of Nitin's son = 8 years 3 months  
 Age of Nitin = (8 years 3 months)  $\times 4$   
 $= 32\text{ years } 12\text{ months}$   
 $= 33\text{ years}$

10. (C) Total distance ran by 4 boys and 6 girls  
 $= 15.6\text{ km}$   
 $15.6 \div 2 = 7.8$   
 4 Boys =  $7.8\text{ km}$       8 girls =  $7.8\text{ km}$   
 1 Boy =  $7.8 \div 4$       1 girl =  $7.8 \div 6$   
 $= 1.95\text{ km}$        $= 1.3\text{ km}$

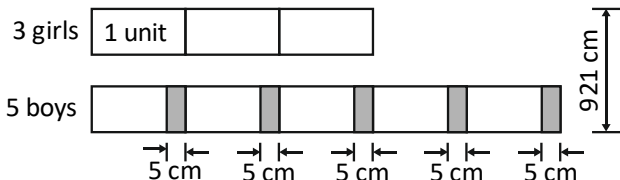
11. (B) Given  $\triangle + \triangle + 6 = \triangle + \triangle +$   
 $\triangle + \triangle$   
 $2\triangle + 6 = 4\triangle$   
 $4\triangle - 2\triangle = 6$   
 $2\triangle = 6 \Rightarrow \triangle = \frac{6}{2} = 3$

12. (B) Multiples of 21 between 200 and 400  
 are : 210, 231, 252, 273, 294, 315, 334,  
 337, 578, 399.  
 10 multiples.

13. (D) Angle P is a right angle.

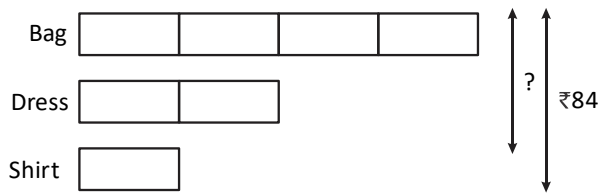
14. (A)  $13455 + 76111$   
 Rounding off each number nearest to ten  
 $13455 = 13460$   
 $76111 = 76110$   
 Sum =  $76110 + 13460 = 89570$

15. (A)



3 girls 1 unit  
 5 boys  $5 \times 5\text{ cm} = 25\text{ cm}$   
 $8\text{ units} \rightarrow 921 - 25 = 896\text{ cm}$   
 1 unit  $\rightarrow 896 \div 8$   
 $= 112\text{ cm}$  (height of each girl)  
 $112 + 5 = 117\text{ cm}$   
 The height of each girl is 112 cm and each boy is 117 cm

16. (C)



$$7 \text{ units} \rightarrow ₹84$$

$$1 \text{ unit} \rightarrow ₹84 \div 7$$

$$6 \text{ units} \rightarrow 12 \times 6 = ₹72$$

The total cost of the dress and the bag is ₹72

17. (D)  $74.1\% = 0.741 \times 100 = 74.1\%$

18. (B) Length of the rod =  $3 + 5 + 7 = 15$

Length of 3 pieces in the ratio = 3:5:7

$$= \frac{3}{15} : \frac{5}{15} : \frac{7}{15}$$

$$\text{Fraction of the smallest piece} = \frac{3}{15} = \frac{1}{5}$$

19. (C) Area of the 1 small square

$$= (1 \times 1) \text{ cm}^2 = 1 \text{ cm}^2$$

Number of shaded squares = 8

$$\text{Shaded area} = 8 \times 1 = 8 \text{ cm}^2$$

20. (A) Total mass of a sack of rice & 8 identical bags of flour = 51.4 kg

$$\text{Mass of each bag} = 4.92 \text{ kg}$$

$$\text{Mass of 8 bags of flour} = 4.92 \text{ kg} \times 8$$

$$= 39.36 \text{ kg}$$

Mass of a sack of rice

$$= 51.4 \text{ kg} - 39.36 \text{ kg} = 12.04 \text{ kg}$$

21. (D) Time spent on revising the school work in 1 day = 78 minutes

$$= 1 \text{ h } 18 \text{ minutes}$$

$$8 \text{ days} = 1 \text{ h } 18 \text{ minutes} \times 8$$

$$= 8 \text{ h } 144 \text{ min} = 10 \text{ hrs } 24 \text{ min}$$

22. (A) Largest single digit prime number = 7

Smallest three digit prime number = 101

$$= 101 - 7 = 94$$

23. (B)  $\frac{4}{9} + 1\frac{2}{3} = \frac{4}{9} + \frac{5}{3}$

$$= \frac{4}{9} + \frac{15}{9} = \frac{19}{9} = \frac{18}{9} + \frac{1}{9}$$

$$= 2 + \frac{1}{9} = 2\frac{1}{9} \text{ kg}$$

He had  $2\frac{1}{9}$  kg of sugar at first.

24. (A) Temperature of the rod =  $120^\circ \text{ C}$

Amount of heat lost every minute =  $2^\circ \text{ C}$

$\therefore$  Amount of heat lost for 16 minutes

$$= 16 \times 2^\circ \text{ C} = 32^\circ \text{ C}$$

$\therefore$  The temperature of the rod after 16 minutes =  $120^\circ \text{ C} - 32^\circ \text{ C} = 88^\circ \text{ C}$ .

25. (B)  $P = A - I = ₹(500 - 100) = ₹400$

### GENERAL SCIENCE

26. (C) The stages in the life cycle of a flowering plant are flowering, pollination, fertilisation, fruits and seeds.

27. (B) Frog's youngone is called tadpole it resembles fish and breathe through gills and when it grow up into an adult called frog and it breathe through lungs.

28. (B) Pumice rock is a form of granite rock and is light porous rock.

29. (C) X - Coal; Y - LPG; Z - Petrol.

30. (A) Earth is a planet that revolves around the sun and moon. The moon is the satellite that revolves around the planet (Earth).

31. (D) Rice is a cereal and radish is a root part. Maize is a cereal and carrot is the root part of the plant.

32. (D) Water takes the shape of the container and the level of the water changes.

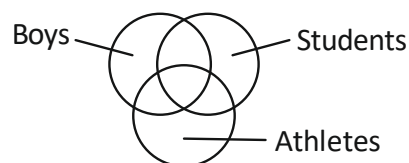
33. (A) Roshini described about housefly.

34. (D) When Arun has dropped a stone in the trough there is a slight change in the level of water in the trough because the stone occupies space.

35. (D) Uranus - Coldest planet, Mars - Red planet, Mercury - Smallest planet, Saturn - Second largest planet.
36. (C) In the given flow chart, X could be oxygen as it promotes burning. Y could be carbon dioxide as it does not promote burning but it is directly used by plants to make food and Z could be nitrogen as it neither promotes burning nor it is used directly by plants to make food.
37. (C) In the given experiment time taken by water to pass through  $P > R > S > Q$ . So, P, Q, R and S could be clay, gravel, loam and sand respectively.
38. (D) Wheel and axle arrangement is found in bicycle, sewing machine and screwdriver.
39. (B) Brihadeshwara temple is made up of granite rock, hence P is an igneous rock. Taj Mahal is made up of marble, hence Q is a metamorphic rock. Red Fort is made of red sandstone, hence it is a sedimentary rock.
40. (A) Air pressure is used to drink from the juice packet.
41. (B) The Sun, Earth and Moon come in a straight line during an eclipse. When the Moon comes between the Sun and Earth, solar eclipse occurs.
42. (A) The given figure is of Ursa Major Constellation.
43. (B) Pea, Balsam, Poppy and Geranium seeds are dispersed by explosion.
44. (A) In the given relationship, the joint present in elbow is hinge joint and gliding joint is present in wrist bones.
45. (B) Mosquitoes and their larvae on stagnant water can be controlled by spraying oil on the surface of water.
46. (D) The seeds of Hiptage have wings attached to them which help them float in air to long distances.
47. (C) In the given figure, P is cerebrum, Q is cerebellum, R is medulla and S is pons. Medulla regulates blood pressure and blood flow in our body.
48. (A) A crack or a break in a bones is called a fracture. The cloth tied around the neck gives support to the arm.
49. (D) Polio, dengue, flu, chicken pox and measles are caused by virus.
50. (D) Insect 'X' is an ant whose body is covered with cuticle.
51. (A) Forceps belong to III Class lever.
52. (C) Rickets is caused due to deficiency of vitamin D.
53. (D) Pigeon has body covering of feathers while bat has body covering of hair.
54. (C) Penguin and dolphin both possess backbone and flippers. They both breathe through lungs. Penguin is a bird that lays eggs. Dolphin is a mammal that gives birth to young ones.
55. (A) The skull of an adult human being contains 22 bones.

### CRITICAL THINKING

56. (D) Some boys are athletes, and some boys are students. Also, some students are athletes. So, they are partly related to one another.



57. (A) 2, 4, 5, 1, 3  
Pressure > Rain > Flood > Protect > Relief
58. (C) Option (A): Ravi & Kartik were born in january while Akshat was born in march. In this case we don't know year. So, we can't give enough information to answer the question.  
Option (B): Ravi is elder than both of his brother. This is also not enough information.  
Option (C): Ravi is eldest Karthik is not youngest. So, Akshat is youngest. Option (C) is correct
59. (D) The part 1 above 2<sup>nd</sup> figure.

60. (B) 3 kittens 12 parrots

Total Number of Animals

$$\text{Parrots} + \text{Kittens} = 15$$

$$\text{Parrots} = 15 - \text{Kittens}$$

$$\text{Parrots} \times 2 + \text{Kittens} \times 4 = 36$$

$$(15 - \text{Kittens}) \times 2 + 4 \times \text{Kittens} = 36$$

$$30 - 2 \text{ Kittens} + 4 \text{ Kittens} = 36$$

$$2 \text{ Kittens} = 36 - 30$$

$$\text{Kitten} = 3$$

$$\text{Parrots} = 15 - 3 = 12$$

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