



NATIONAL LEVEL SCIENCE TALENT SEARCH EXAMINATION (UPDATED)

CLASS - 5
Question Paper Code : 1P104

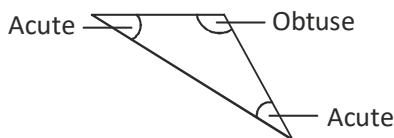
KEY

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

SOLUTIONS

MATHEMATICS

01. (A) $P = 1023 ; Q = 549$



02. (B)

03. (B) $4 \times 32 = 128$ girls

$$128 - 32 = 96$$

96 more girls than boys

04. (A) 16,16,16,616 = Sixteen crore sixteen lakh sixteen thousand six hundred sixteen

05. (C) $2567209 + 0 + 63125 = 63125 + 2567209$

06. (A) CMXCVIII

07. (C) Volume of water in the tank

$$= \frac{4}{5} \times 32 \text{ l}$$

Volume of water poured into a pail

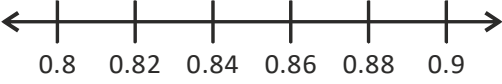
$$= \frac{1}{4} \text{ (Volume of water in the tank)}$$

Volume of water left in the tank

$$= \left(1 - \frac{1}{4}\right) \text{ (Volume of water in the tank)}$$

$$= \frac{3}{4} \times \frac{4}{5} \times 32 \text{ l} = \frac{3 \times 32}{5} \text{ l}$$

$$= \frac{96}{5} \text{ l} = 19 \frac{1}{5} \text{ l}$$

08. (C) 
09. (D)
$$S.I = \frac{P \times R \times T}{100} = \frac{600 \times 6 \times 6}{100} = ₹ 216$$
10. (B) The required product

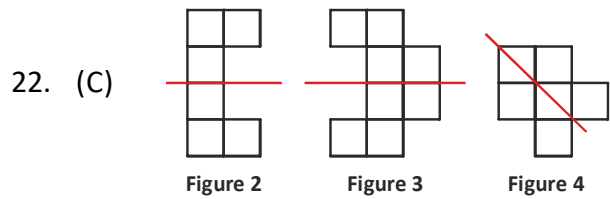
$$= 1\frac{1}{3} \times 3\frac{1}{4} \times \frac{7}{8}$$

$$= \frac{4}{3} \times \frac{13}{4} \times \frac{7}{8}$$

$$= \frac{13 \times 7}{3 \times 8} = \frac{91}{24} = 3\frac{19}{24}$$
11. (B) 64 cm
12. (A) 16 cm²
13. (B)
$$\text{Speed} = \frac{\text{Distance}}{\text{Time}} = \frac{60 \text{ km}}{2 \text{ hours}} = 30 \text{ km/h}$$
14. (B) 1000000 – 9000 = 991000
15. (B)
$$\frac{4}{16} \times 100\% = 25\%$$
16. (C) The freezing point of water is 0°C. This is the temperature at which water turns into ice under normal atmospheric pressure.
17. (B) The fruit seller buys 100 apples at Rs. 6 each.
 So his total cost is 100 × Rs. 6 = 600
 He sells them at Rs. 8, so 100 × Rs. 8 = Rs. 800
 Resulting profit = Rs. 800 – Rs. 600 = Rs. 200
18. (A) The total time from 9:00 AM to 12:20 PM is 3 hours + 20 minutes = 200 minutes
 Each period lasts 40 minutes, so the number of complete periods is $\frac{200}{40} = 5$
 So, there can be 5 complete periods.
19. (D) Total length of 9 pieces = 9 × 90 cm = 810 cm
 Total length of tape = 810 + 8 = 818 cm

20. (B) $1 \times 2 \times 5 \times 10 = 100$

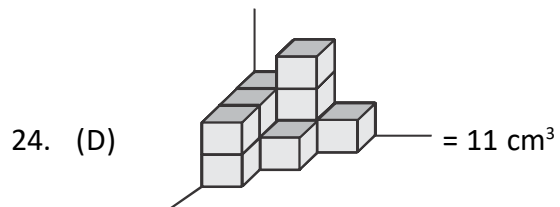
21. (D) $\frac{1}{9}$ is more than 0.12



23. (D) To find the ones digit of $39 \times 39 \times 39 \times 39 \times 39$, we only need to consider one's digit of 9 multiplied repeatedly

$$9 \times 9 \times 9 \times 9 \times 9 = 549$$

So the ones digit of $39 \times 39 \times 39 \times 39 \times 39$ is 9



25. (A) Ratio of number of girls to number of boys = 6:14 = 3 : 7

GENERAL SCIENCE

26. (A) A screw driver is a simple machine that has a wheel and an axle.
27. (C) A big steel ship has chambers that filled with air, this makes the ship to have a lower density than water.
28. (C) Fur keeps the body of an animal warm. In summer to keep cool it try to remove thick fur.
29. (B) Wheelbarrow is an example of II class lever.
30. (A) Mould feed on rotten food and reproduces from spores.
31. (B) Telescope is used to see the moon and distant stars.
32. (A) Gas A is nitrogen.
33. (B) Mushroom, toadstool and fern reproduce by spores.
34. (B) The rat uses incisors to gnaw nuts, grains, meat, and vegetable matter. The rat uses its incisors for biting hard stuff.

35. (C) The vessel in the wrist and neck directly connects to the heart; therefore we can feel the pumping from there.
36. (B) Skull is a bony box also called cranium. It protects brain.
37. (C) Tibia is a long bone in lower leg.
38. (C) Goitre is a iodine deficiency disease.
39. (B) X - hinge joint at elbow and knee and Y - ball and socket joint at shoulder and pelvis
40. (D) Pumice rock is porous like sponge.
41. (D) Camels is a desert animal. It has a hump to store fat. It uses stored food large padded feet to spread their weight long legs are strong and have powerful muscles to carry heavy loads for long distances. Camels have long legs to keep body high above the hot sand and to walk easily.
42. (D) An egg shell, vegetable peel and paper cup are decomposed to form humus, a part of soil.
43. (A) Scales are the small plate or sheild forming part of the outer skin layer of certain animals. Pangolin is a mammal with scales, snake and crocodile are reptiles with scales and shark's fish with scale.
44. (D) Frog breathe through its skin when it is in water.
45. (D) The process of scattering or spreading of seeds to different places is called dispersal.
46. (C) The mesosphere is the third layer of the atmosphere.
47. (B) Q - elbow and T - Knee joints are hinge joints.
48. (A) Granite pumice and basalt are igneous rocks.
49. (D) (ii), (iv), (iii), (i)
Uranus = 84 years
Jupiter = 11.9 years
Mars = 687 days
Earth = 365 days
50. (D) A magnet is used to seperate a mixture of iron filings and saw dust easily.
51. (A) S is cerebrum, it helps in speech, judgement and thinking learning.
52. (B) An apple falling from a tree is an example of gravity.
53. (C) A housefly lays 120 - 150 eggs on garbage. Its life span is about 28 days. It spreads diseases such as cholera, typhoid diarrhoea etc.
54. (D) Gravitational force is absent in space.
55. (B) Bean reproduces by seeds, ginger from stem buds developed on underground stem, fern by spores.

CRITICAL THINKING

56. (D) From the given question $\blacklozenge = 2$
So, $\bullet\bullet = 3$
 $1 + 1 + \text{C} = 6$
 $\text{C} = 6 - 2 = 4$
57. (D) At point Z water comes out with maximum pressure from the balloon.
58. (B) A's son is D's brother means A has 3 childrens (2 daughters (C & D) and one son (given in question A's son is D's brother).
So, B is the uncle to C (A and B are brothers)
59. (B) The given figure has 26 blocks.
60. (D) Let's denote the five numbers as a,b,c,d,e respectively. According to the clues: $a+b+c+d+e=30$
Clue 1 : $5^{\text{th}} + 3^{\text{rd}} = 14$
 $8 + 6 = 14$
Clue 2 : $1^{\text{st}} = 2(2^{\text{nd}}) - 1$
 $7 = 2(4) - 1$
 $7 = 8 - 1$
Clue 3 : $4^{\text{th}} = 1 + 2^{\text{nd}}$
 $5 = 1 + 4$
 $5 = 5$
Clue 4 : $2^{\text{nd}} + 3^{\text{rd}} = 10$
 $4 + 6 = 10$
Clue 5 : $7 + 4 + 6 + 5 + 8 = 30$