



NATIONAL LEVEL SCIENCE TALENT SEARCH EXAMINATION

CLASS - 3
Question Paper Code : 1B107

KEY

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

SOLUTIONS

MATHEMATICS

- 01. (C) Among the options only (C) shows correct venn diagram.
- 02. (C) Digit at ones place has same place value and face value. And, numbers 6592,8562 and 9082 has 2 at ones place.
- 03. (B) The greatest possible product of 2 digit by 1 digit is $99 \times 9 = 981$ (3 digit)

$$\begin{array}{r}
 \boxed{3} \ \boxed{2} \ \boxed{6} \\
 \times \quad \quad \quad 2 \\
 \hline
 6 \ 5 \ 2
 \end{array}$$

04. (C)

- 05. (C) $208 \div 3 = 69 \text{ R } 2$
 $208 \div 4 = 52$
 $208 \div 2 = 104$
 $208 \div 5 = 41 \text{ R } 3$
- 06. (B) Total number of equal parts = 10
 Number of unshaded parts = 4
 So, fraction of unshaded part = $\frac{4}{10}$
- 07. (A) Among the options only 8 is possible to replace the ☺

$$\frac{5}{9} < \frac{8}{9}$$

08. (A) Weight of $\triangle 1 = 250 \text{ g}$
 Weight of $\triangle 6 = 250 \text{ g} \times 6 = 1500 \text{ g}$
 As, weight 4 $\square =$ weight of 6
 Weight of 4 $\square = 1500 \text{ g}$
 Weight of 1 $\square = 1500 \text{ g} \div 4 = 375 \text{ g}$

09. (B) $20 \text{ m} + 20 \text{ cm}$
 $2000 \text{ cm} - 20 \text{ cm}$ ($1 \text{ m} = 100 \text{ cm}$)
 $= 1980 \text{ cm}$

10. (D) The month of July has 31 days.
 Given that it rained on every odd numbered day.

Number of odd numbers from 1 to 31 = 16

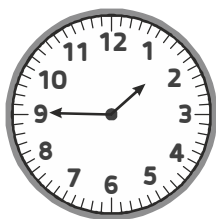
11. (D)

| Figure | Number of sides |
|--------|-----------------|
| P | 16 |
| Q | 4 |
| R | 6 |
| S | 9 |

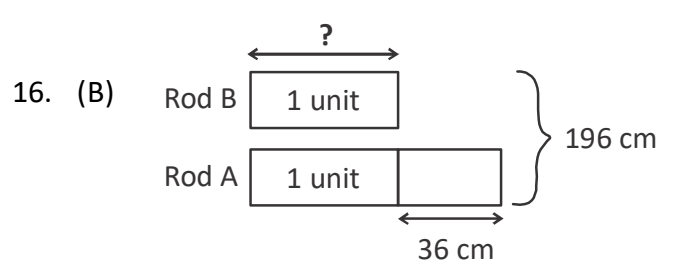
$$16 + 4 - 5 = 6 + 9 \text{ as } 15 = 15$$

$$\text{So, } P + Q - 5 = R + S$$

12. (C) A cylinder has 3 faces.
 13. (A) 1st bell: 9 : 00 AM
 2nd bell: 9 : 40 AM
 3rd bell: 10 : 20 AM
 4th bell: 11 : 00 AM
 14. (C) Total cost = Rs. 250 + Rs. 180 = Rs. 430
 Money needed =
 Rs. 430 - Rs. 320 = Rs. 110



15. (D) = 15 minutes to 2



We draw a model, taking the length of the shorter rod B as 1 unit.

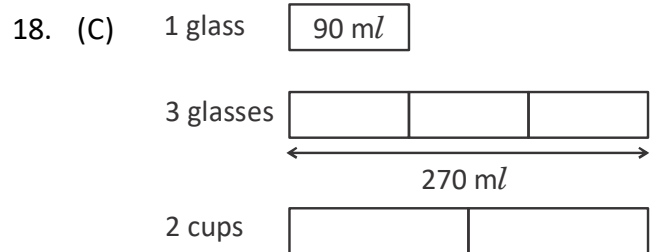
We note that 2 units + 36 cm is 196 cm

Hence, 2 units $\rightarrow 196 - 36 = 160 \text{ cm}$

1 unit 160 $\rightarrow 2 = 80 \text{ cm}$

The length of rod B is 80 cm

17. (Delete)



Capacity of 3 glasses $\rightarrow 3 \times 90 = 270 \text{ ml}$

Hence, the capacity of 2 cups is 270 ml

Capacity of 1 cup $\rightarrow 270 \div 2 = 135 \text{ ml}$

Capacity of 3 cups $\rightarrow 3 \times 135 = 405 \text{ ml}$

The total capacity of 3 such cups is 405 ml

19. (D) Option A: $\frac{2}{6} + \frac{4}{6} = \frac{6}{6} = 1$

Option B: $\frac{1}{3} + \frac{1}{3} + \frac{1}{3} = \frac{3}{3} = 1$

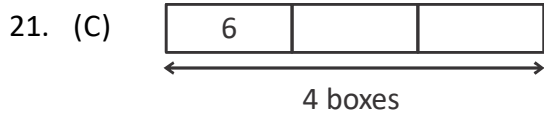
Option C: Note that $\frac{2}{4}$ is also equal to $\frac{1}{2}$

Option D: $\frac{2}{5} + \frac{2}{5} + \frac{2}{5} = \frac{6}{5}$

$\frac{6}{6}$, $\frac{3}{3}$ and $\frac{2}{2}$ are equal to 1 whole each

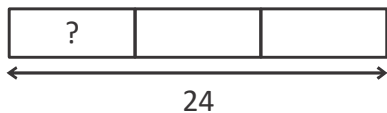
$\frac{6}{5}$ is not equal to one whole (D)

20. (A) 38 hundreds 15 tens = $3800 + 150 = 3950$



Number of chocolates Mrs. Smith had

$$\rightarrow 4 \times 6 = 24$$



$$24 \div 3 = 8$$

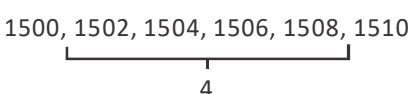
Each child got 8 chocolates

22. (D) Option (A) : $17 \div 4 = 4 \text{ R } 1$

Option (B) : $133 \div 4 = 33 \text{ R } 1$

Option (C) : $300 \div 4 = 75$

Option (D) : $451 \div 4 = 112 \text{ R } 3$

23. (D) 

\therefore There are 4 even numbers between 1500 and 1510.

24. (D) $3 \times 28 = 84$; $100 - 84 = 16$ books

25. (D) Option (A): 2 fifty paise and 5 ten paise coins = Rs. 1.50

Option (B): 1 one rupee and 25 five paise coins = Rs. 2.25

Option (C): 3 fifty paise and 4 twenty paise coins = Rs. 2.30

Option (D) : 5 twenty paise and 10 ten paise coins = Rs. 2.00

GENERAL SCIENCE

26. (A) A crane is a wading bird.

27. (B) Soup and juice are liquid states of matter

28. (C) Trees give out water during the process of photosynthesis in the form of watervapour. This is called transpiration. Transpiration make us to feel cool under a big tree.

29. (A) Handlens magnify objects hence it is used to see the tiny parts of an insects.

30. (D) Topsoil, subsoil and bedrock soil form the soil profile.

31. (C) Arrow labelled 3 represents evaporation

32. (B) The moon is the closest neighbour to the earth than the stars. Hence the moon looks larger and bigger than the stars.

33. (B) In the given options option (B) is sparrow. The beak of sparrow is best adapted for cracking seeds.

34. (A) Tailor uses measuring tape for measuring clothes.

35. (C) A magnet attracts pins. It helps to pick them up without touching.

36. (C) Carrot is the root part of the plant.

37. (C) Fallen seed grows into a new plant.

38. (A) A plant in a food chain make its own food. Hence they are called producers.

39. (B) A rabbit that eats carrot is a herbivore.

40. (D) The sweet potato is a storage root plant. Besides helping to absorb water and mineral salts for the plant. It also stores food.

41. (C) The beak of the duck help to scoop fish.

42. (B) Millilitres and litres are the units used to measure the volume of liquid (l).

43. (B) When air is blown into the balloon, it occupies the space inside it.

44. (C) Plants with weak stems are called climbers. They need support to climb to get sunlight.

45. (C) The heart, blood and blood vessels make up the circulatory system. The lungs and windpipe belong to the respiratory system.
46. (C) Insects have wings to fly, bat is a mammal that has wings to fly and has wings to fly and has two legs, Whereas birds are the only living things that has feathers.
47. (D) The mushroom and bread mould can be grouped under fungi.
48. (D) The puppy is a living thing. It is able to bark, drinks milk and wag its tail. Having four legs does not necessarily mean that it is a living thing. The table has four legs but it is not a living thing.
49. (C) We get eggs from hens.
50. (A) Cheetah is the fastest running animal.
51. (D) All the animals in the box give birth to young, feed on plants and suckle younger ones.
52. (C) The leaves of pine tree are needle shaped. So that they can retain water & helps the trees to survive in winter.
53. (A) Birds push the wings against air.
54. (C) Formation of water droplets on surface of tumbler is called condensation.
55. (B) Humus → Topsoil → Subsoil → Bed

CRITICAL THINKING

56. (D) Let us assume two lawyers are lawyer A and lawyer B.

If Lawyer A is the father of Lawyer B's son, then

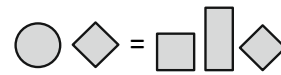
Lawyer A is a man (since he is the father).




Lawyer B must be a woman (since the son must have a mother).

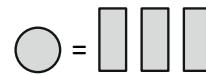
Therefore, Lawyer A is the father and Lawyer B is his wife (the mother of the son).

57. (B) Longest fish ate 4 flies and short fish ate 3 flies. So remaining 2 flies are eaten by medle fish.

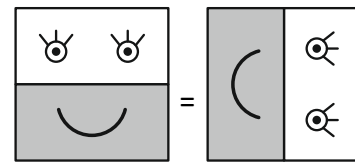
58. (D) From step 1 we get weight of circle.



Therefore,  =  



59. (A)



60. (A) $4 + 3 + (6 \times 2) + (1 + 1 + 1)$
 $7 + 12 + 3 = 22$

The End
