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NATIONAL LEVEL SCIENCE TALENT SEARCH EXAMINATION

CLASS - 3
Question Paper Code : 1P214

KEY

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

SOLUTIONS

MATHEMATICS

01. (A) Numbers from 1 to 32 not counted:
    1, 2, 5, 7, 10, 11, 13, 14, 17, 19, 22, 23, 25, 26, 29, 31

02. (C) A cylinder has 3 faces, 2 flat and 1 curved

03. (C) Left ring numbers
    79, 4, B, 45, 11, A → sum = 160
    1. Add known numbers
       79 + 4 + 45 + 11 = 139
    2. Remaining sum for B + A
       = 160 − 139 = 21

Right ring numbers: 10, 46, 25, 31, 45, B → sum = 160

1. Add known numbers: 10 + 46 + 25 + 31 + 45 = 157
2. Remaining sum for B = 160 − 157 = 3

Now B = 3
A + B = 21
A + 3 = 21
A = 18

04. (D) Varun's mum uses 2 slices of bread for 1 sandwich.

One pack has 24 slices.

She has two whole packs, which is 2 × 24 = 48 slices.

She also has half a pack, which is half of 24 = 12 slices.

Total slices = 48 + 12 = 60 slices.

Since each sandwich needs 2 slices, we divide the total slices by 2:

60 ÷ 2 = 30 sandwiches.

So, with two whole packs and one half packs, she can make 30 sandwiches.

05. (D) To make the number as small as possible, insert 3 after the 1 in 2014 → 20134.

06. (C) ✦ = 4521 − 1000 = 3521

☺ = 3521 − 1967 = 1554

3521 + 1554 = 5075

07. (B) Aman jogs 72 metres in 12 seconds.

His brother takes 3 seconds less → 12 − 3 = 9 seconds for 72 metres.

We want the time for 216 metres, which is 3 times 72 metres.

Aman: 12 × 3 = 36 seconds

Brother: 9 × 3 = 27 seconds

Total time together = 36 + 27 = 63 seconds

08. (C) 8 × 49 = 392

8 children received 392 sweets

392 + 22 + 414

There were 414 sweets in 3 packets.

414 ÷ 3 = 138

There were 138 sweets in each packet at first.

09. (B) 1583 − 1440 = 143

10. (A)

Types of lines	Cards
Parallel lines	U, V, Y, Z
Not parallel lines	T, W, X

11. (B) 150 ml − 70 ml = 80 ml

12. (B) The number with 6 in the tens place and thousands place is 6568.

13. (D) 3127, 3129, 3131, 3133

14. (B) When dividing by 9, possible remainders are 0 to 8. 10 is not possible.

15. (C) $\frac{3}{8}$ $\frac{2}{6}$ $\frac{6}{8}$ $\frac{3}{4}$ $\frac{9}{12}$ $\frac{7}{10}$ $\frac{4}{5}$ $\frac{2}{4}$

16. (B) $\frac{12}{24} = \frac{1}{2}$

17. (D) Children are 34 more than adults → 154 + 34 = 188 children

Total people = 154 + 188 = 342

18. (C) 48 ÷ 3 = 16

19. (A) 280 cm ÷ 7 = 40 cm

40 cm × 5 = 200 cm = 2 m

20. (B) 2 hours = 120 minutes

The computer shuts down every 20 minutes

120 ÷ 20 = 6

It will shut down 6 times.

21. (C) 18

We are looking for five consecutive numbers that add up to 90.

Step 1: Think of five numbers in a row: for example, 10, 11, 12, 13, 14.

Step 2: Notice that the middle number is in the center. In any five consecutive numbers, the middle number counts once, and the numbers around it balance out.

Step 3: To get the total sum, we can divide 90 by 5 (because there are 5 numbers): 90 ÷ 5 = 18

Step 4: So, the middle number is 18. The five numbers are: 16, 17, 18, 19, 20

Step 5: Quick check:

16 + 17 + 18 + 19 + 20 = 90

22. (D) 3700 – 12 = 3688

The digit in the hundreds place is 6.

23. (A) 2A + 2B + 4 g = 24 g

2A + 2B = 20 g

A + B = 10 g

A = B

5 g = 5 g

24. (D) Toy car costs Rs. 8

Toy car is 4 times the cost of a ball ? Ball costs 8 ÷ 4 = Rs. 2

Cost of 2 balls = 2 × 2 = Rs. 4

Total cost = 8 + 4 = Rs. 12

Deva paid Rs. 12 altogether.

25. (B) in this figure there are 10 sides.

GENERAL SCIENCE

26. (B) Caterpillars are herbivorous larvae that consume leaves for growth before metamorphosing into butterflies or moths.

27. (B) Trees provide birds protection from predators and weather , demonstrating how plants offer vital shelter to animals.

28. (B) Creepers from a dense mat over the soil, protecting it from wind and water erosion by holding the soil particles together.

29. (D) The bird in the given figure is a hen ,it gives us eggs and meat. They are rich in proteins.protein is a body building food . it helps to build muscles, repair tissues and to grow.

30. (D) Through all of these given statements we get most of the water, that our body needs.

31. (C) Soil contains minerals, organic matter (humus), air and water along with rock particles.

32. (B) Sense organs help us gain knowledge about our surroundings, so they are called gateways of knowledge.

33. (C) Deer and fish are consumers because they depend on plants or other organisms for food. Grass and trees are producers, not consumers.

34.. (A) Burning garbage releases smoke and harmful gases, making the air dirty and unsafe to breathe.

35. (B) Water changes into water vapour and mixes with air through evaporation.

36. (B) Damage to the stem blocks the transport of water to leaves, causing them to wilt.

37. (A) Lungs are involved in breathing and gas exchange.

38. (C) Order from nearest to farthest from the Sun is Mercury, Earth, Jupiter, Uranus.

39. (D) Earth is not tilted fully towards or away from the Sun, so the season can be summer or spring.

40. (D) A break in a bone is called as a fracture.

41. (B) Rice, bread, and potatoes are rich in carbohydrates and give energy, so they are primary energy sources.

42. (B) Woodpeckers peck tree trunks to make holes for nesting and shelter.

43. (B) Sandstone is formed from layers of sediments, so it is a sedimentary rock.

44. (B) 1) Circulatory system helps in the movement of blood

2) Skeletal system helps body to move.

3) Reproductive system helps in production of offspring

4) Respiratory system helps in exchange of air.

45. (A) The weight of a book is measured in grams.

46. (A) Rubbing ice on a bruise reduces pain and swelling and is correct first aid.

47. (B) The Earth takes one year to complete one revolution around the Sun.

48. (A) Change of water into steam/vapour is called evaporation.

49. (B) When an ice cube melts, only its shape changes, not mass, smell, or colour.

50. (C) Only birds have feathers; wings and bones are found in other animals too.

51. (D) A measuring jug is used to measure liquids like milk in millilitres.

52. (C) A cow has flat grinding teeth and no sharp teeth to tear food.

53. (B) An igloo has a dome shape, which helps it stay strong and warm.

54. (C) Constellations are patterns formed by stars in the sky.

55. (D) Climbers have weak stems and need support to grow upward.

CRITICAL THINKING

56. (B)

Screwdriver is specifically designed for turning screws.

When using a screwdriver, you insert its tip into the head of a screw and turn it to tighten or loosen the screw.

57. (D) Birthdays are on 20 February, 12 April, 12 May, and 25 May.

Bindu and Anitha were born in the same month. Only May comes twice, so both are born in May.

Anitha and Chaitra were born on the same day. The same day is 12, so Anitha is 12 May and Chaitra is 12 April.
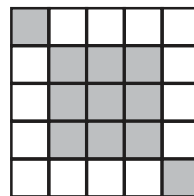
The remaining birthdays are 25 May and 20 February.

So Bindu = 25 May and Deepa = 20 February.

February comes before April and May.

So, the child born on 20 February is the oldest.

58. (B)

14 boxes are unshaded

59. (C) The jumping pattern repeats as:

1 → both feet

2 → left foot

3 → both feet

4 → right foot

So, the right foot comes on every 4th square.

Counting in 4s: 4, 8, 12, 16, 20

60. (C)