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NATIONAL LEVEL SCIENCE TALENT SEARCH EXAMINATION

CLASS - 4

Question Paper Code : 1P214

KEY

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

SOLUTIONS

MATHEMATICS

01. (D) 666667 × 666667 = 444444888889

02. (D) Start time = 17:40

108 minutes = 1 hour 48 minutes

Add step by step

17:40 + 1 hour = 18:40

18:40 + 48 minutes = 19 : 28

03. (D) Birthdays are 20 Feb, 12 Apr, 12 May, 25 May.

Bunny and Aarya are in the same month → only May comes twice.

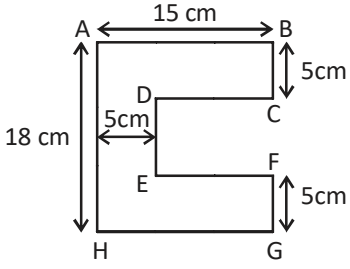
Aarya and Chitra are on the same day → day 12 comes twice.

So, Aarya = 12 May, Chitra = 12 April.

Remaining dates: Bunny = 25 May, Rani = 20 February.

February comes first in the year.

04. (C)



DE = 18 cm - 5 cm - 5 cm = 8 cm

CD = EF = 15 cm - 5 cm = 10 cm

Perimeter

AB + BC + CD + DE + EF + FG + GH + HA

= 15 cm + 5 cm + 10 cm + 8 cm + 10 cm + 5 cm

+ 15 cm + 18 cm = 86 cm

The perimeter of this figure is 86 cm

05. (C) 

06. (D) By 2:15 Saho has done 5 × 15 = 75 questions.

After 2:15, Rahul does 6 per minute and Saho 5 per minute, so Rahul gains 1 question per minute on Saho.

To make up 75 questions at 1 per minute takes 75 minutes.

75 minutes after 2:15 is 3:30 pm.

07. (A) Sam has 100 m left

Paddy is 50 m ahead → Paddy has 50 m left

Martin is halfway → Martin has (100 + 50)/2 = 75 m

08. (B) Ravi's answer is always even

Because any number multiplied by 2 is even.

09. (B) 4 metres = 400 cm

Each balloon needs 35 cm.Largest whole

$$\text{number} = \frac{400}{35} = 11$$

10. (A) A perfect number equals the sum of its proper divisors.

For 28 : proper divisors are 1,2,4,7,14;

Sum = 1 + 2 + 4 + 7 + 14 = 28

11. (D)  $= \frac{3}{8} < \frac{1}{2}$

12. (D) 80 candles take 80 days to be used up, and will give 80 pieces of wax to form 20 new candles. 20 candles take another 20 days to be used up, and will give 20 pieces of wax to form 5 new candles. 5 candles take another 5 days to be used up, and 4 out of the 5 pieces of wax can be used to form one last candle. One candle will be used up in 1 day. Total number of days = 80 + 20 + 5 + 1 = 106

13. (C) 2500 g – 850 g – 225 g = 1425 g

14. (B) Perimeter of the given triangle

= 10 + 15 + 19 = 44 cm

So, the length of the wire is 44 cm.

(A) Perimeter of the shape

= 6 cm + 15 cm + 6 cm + 15 cm = 42 cm

(B) Perimeter of the shape

= 11 cm + 11 cm + 11 cm + 11 cm = 44 cm

(C) Perimeter of the shape

= 22 cm + 13 cm + 16 cm = 51 cm

(D) Perimeter of the shape

= 16 cm + 16 cm + 16 cm = 48 cm

15. (B) She practices every day except Saturday → practices 6 days.

Daily practice = 45 minutes

45 minutes, so weekly = 6 × 45 = 270 minutes

6 × 45 = 270 minutes

270 min = 4 hours 30 minutes

4 hours 30 minutes

16. (D) Length of QR = 5 m

QR is 15 cm longer than PQ

Length at PQ = 5 m – 15 cm

= 5 m – 0.15 m = 4.85 m

Length of PR = 5 m + 4.85 m = 9.85 m

17. (C) To round to the nearest thousand, look at the hundreds digit (7 in 68745). Since it's 5 or more, round up:

68745 → 69000

18. (D) A number that is a factor of 72 and a multiple of 6 must divide 72 and be divisible by 6.

Check options

66: not a factor of 72 .

42: not a factor of 72.

9: factor of 72 but not a multiple of 6.

36: factor of 72 and 36 ÷ 6 = 6, so a multiple of 6.

19. (C) Daily hours: from 7:30 a.m. to 5:30 p.m. = 10 hours.

He works 5 days a week → weekly

= 5 × 10 = 50 hours.

In 2 weeks = 2 × 50 = 100 hours.

20. (B) Perimeter: Both have a perimeter of 12 units. (1 + 5 + 1 + 5 = 12 and 2 + 4 + 2 + 4 = 12).

Area: Let's calculate the area.

Area of Rectangle 1: 1 × 5 = 5 square units

Area of Rectangle 2: 2 × 4 = 8 square units

This demonstrates a key rule: for a given perimeter, a shape closer to a square will have a larger area.

21. (C) A regular 5-pointed star has 5 lines of symmetry.

22. (D)

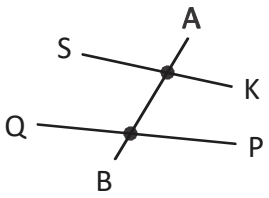


Figure have 2 points of intersection.

23. (D)

(1) Capacity of container P = 20 L.

Half of P = 20 ÷ 2 = 10 L.

(2) Container Q fills P halfway.

Q = 1 L per bottle.

Number of Q bottles used = 10 ÷ 1

= 10 bottles.

(3) Container R fills the remaining half of P.

R = ½ L per bottle.

Remaining volume = 10 L.

Number of R bottles used = 10 ÷ 0.5

= 20 bottles.

24. (B) 25 × 70 = 1750

25. (A) One and three quarters hours

$$=1\frac{3}{4}\text{hr}=\frac{7}{4}\text{hr}$$

Minutes: $\frac{7}{4}\times 60=105$ minutes

GENERAL SCIENCE

26. (A) Water lilly is a floating aquatic plant

27. (C) Wedge is used for cutting, splitting and piercing tool.

28. (A) The amphibian shown in the picture is a frog. The young one of a frog is tafepole that breathes through gills

29 (C) P-iv; Q-iii; R-i; S-ii

30. (D) Snakes, birds and frogs are egg laying animals.

31. (D) Carrot is the root part of the plant

32. (B) A leaf insect and polar bear merge with their surrounding to confuse their enemies .

33. (B) Calcium is essential for strong bone and teeth

34. (D) Venus is the brightest and the second plant in the solar system

35. (C) Garbage collected from our houses should be dumped in a compost pit such that we can reduce pollution caused by garbage the garbage kept in the compost pit undergo decomposition and forms a good natural manure.

36. (B) Telescopes help scientists study distant planets, stars, and atmospheric patterns

37. (B) Brushing teeth twice a day removes food particles and germs,preventing cavities and keeping gums healthy

38. (B) Strong claws provide grip while the bushy tail aids balance ,enabling swift and safe tree movement

39. (C) Sundew is an insectivorous (carnivorous) plant that traps and digests insects to obtain essential nutrients.

40. (D) Banana (fruit, stem, flower), methi (leaves, seeds), and onion (bulb, leaves) each have two or more edible parts.

41. (D) The animal that breathes in the same way as fish is the tadpole . It uses gills in water just like fish.

42. (D) The solutes soluble in water are sugar and salt (option D).

43. (B) A compass shows directions (North, South, East, West), which is essential for reading maps.

44. (A) Grasshopper has a 3-stages of life cycle egg → nymph → adult. Other insects listed have 4 stages.

45 (B) To keep the egg warm so that it hatches. Birds sit on eggs for incubation, maintaining proper temperature for embryo development.

46. (C) The rotation of the earth on its own axis.

Earth's rotation causes day and night as different parts face the Sun.

47. (A) (i), (iv) and (v) only

(i) Snow – solid

(iv) Water vapour – gas

(v) Ice – solid

Lake water (ii) and river water (iii) are liquid.

48. (B) Rainwater is generally fresh and can be made safe for use through simple treatment.

49. (C) Iodine turns blue-black in the presence of starch. Shreya's experiment directly tests for starch, not what is needed for photosynthesis.

50. (A) In deserts, evaporation is high due to heat. Underground tanks keep water cooler and prevent water loss.

51. (B) Washing hands removes dirt and harmful germs that can cause infections or stomach problems.

52. (B) Vegetables are rich in vitamins (like Vitamin C), minerals, and fiber that help protect the body and strengthen immunity.

53. (D) Food is made in leaves via photosynthesis, not roots.

54. (A) It is a seed with stored food (endosperm) for growth.

55. (A) Omnivores eat both plants and animals.

CRITICAL THINKING

56. (B) To support the most weight, the stack must be stable, meaning the blocks are directly on top of each other with no overhang.

Stack A – blocks are offset → unstable.

Stack B – all blocks are aligned → very stable.

Stack C – some offset → less stable.

Stack D – more offset → least stable.

57. (C) 1 line → 1 + 1 = 2

2 lines → 1 + 1 + 2 = 4

3 lines → 1 + 1 + 2 + 3 = 7

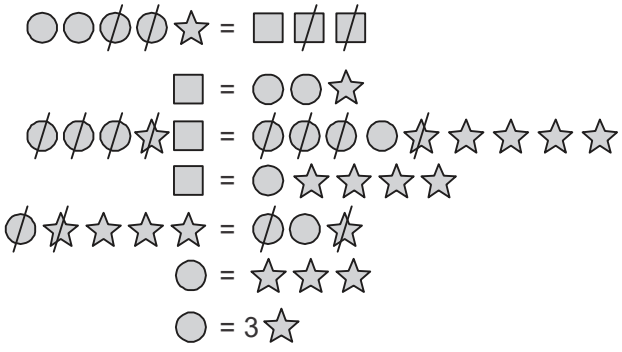
So for 9 lines:

Parts = 1 + (1 + 2 + 3 + 4 + 5 + 6 + 7 + 8 + 9) = 46

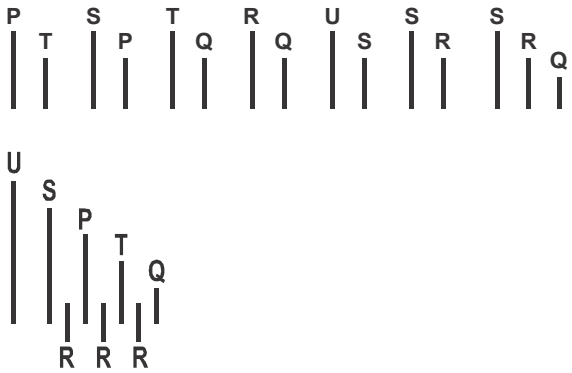
58. (A)

	Hockey	Cricket yellow	Foot ball	Tennis white	Kabaddi
P	✔		✔		
Q					
R				✔	
S		✔			
T					✔

59. (C)



60. (B) U



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