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NATIONAL LEVEL SCIENCE TALENT SEARCH EXAMINATION (UPDATED)

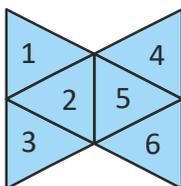> **CLASS - 3**
> **Question Paper Code : UN499**

KEY

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

SOLUTIONS

MATHEMATICS

01. (C) 12 − 2 + 3 = 13 (children, now)

3 − 2 = 1 (adult, now)

13 + 1 = 14 (total people, now)

Fraction = $\dfrac{13}{14}$

02. (C)

The number of triangles Q to be used to cover the shape P = 6

03. (B) $10 \times 2 = $

 = 20; = 4

 ÷ = 20 ÷ 4 = 5
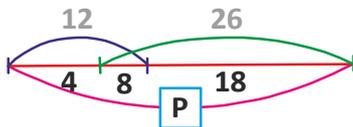
04. (D) Option (A) : 29 × 23 = 667 (Odd)

Option (B) : 41 × 25 = 1025 (Odd)

Option (C) : 71 × 17 = 1207 (Odd)

Option (D) : 28 × 13 = 364 (Even)

05.	(B)	No. of red balls left with Adithya

05. (B) No. of red balls left with Adithya

= 580 − 405 = 175

No. of blue balls left with him

= 420 − 211 = 209

The number of more blue balls than red balls Aditya has = 209 − 175 = 34

06. (D) $\dfrac{7}{11}, \dfrac{9}{11}, \dfrac{10}{11}, \dfrac{11}{11}$

07. (C) Since the digit in the ones place is '1',

R has to be 8. (11 − 3 = 8)

So, Q will then be 0. (5 − 4 − 1 = 0)

P will be 6. (8 − 2 = 6)

8 + 6 = 14

08. (D) 4 + 8 + 18 = 30

09. (D) Half past twelve is 12: 30 P.M

10. (B) Two thousand and sixty three

Th	H	T	U
2	0	6	3

11. (D) Number of straight lines in the problem figure = 4

and Number of curved lines = 4

Only option 'D' has 4 straight lines and 4 curved lines.

12. (D) Option (A) : 2 × 250 ml = 500 ml

Option (B) : 3 × 250 ml = 750 ml

Option (C) : 500 ml
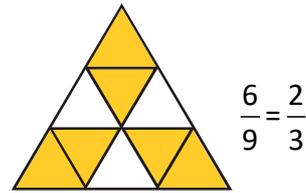
Option (D) : 2 × 500 ml = 1000 ml = 1 l

13. (D) Among the given options (A) and (B) have tens digit twice of Hundred's digit also sum equal to 9. But since the 3 digit number is even, option (D) is the answer.

14. (A) Number of triangles = 9

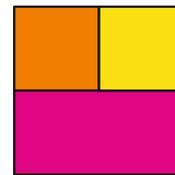Number of triangles already shaded = 2

Number of triangles to be shaded for ratio = 4

$\dfrac{6}{9} = \dfrac{2}{3}$

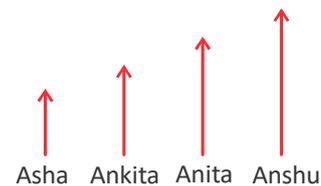15. (A) 15 + 26 = 26 + 15 = 41

16. (D) 3000 − 400 = 2600 = 260 tens

17. (D) From the given diagram, $\dfrac{1}{4}$ of the piece of paper was painted orange.

18. (A) 12 × 7 = 84 (gave away)

84 + 48 = 132

19. (D)
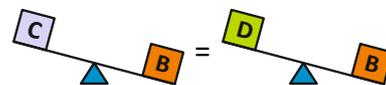

Asha   Ankita   Anita   Anshu

20. (D)

∴ Weight of C = weight of D

⇒ weight of B > weight of C and weight of B > weight of D

⇒ weight of A > weight of B

⇒ weight of A > weight of B > weight of D

∴ We can say that D is lighter than A.

21.	(C)	Volume of water needed to fill container B = 20 – 14 = 6 litres

21. (C) Volume of water needed to fill container B = 20 – 14 = 6 litres

Volume of water left in container A = 17 litres

22. (A) is not perpendicular.

23. (D) Rs. 1643 + Rs. 78 7 = Rs. 2430

Rs. 3000 – Rs. 2430 = Rs. 570

24. (C) 5 hours = 5 × 60 mins = 300 mins

300 mins + 35 mins = 335 minutes.

25. (B) P × Q = 63 i.e., 9 × 7 = 93

Q × R = 42 i.e., 7 × 6 = 42

P = 9, Q = 7, R = 6

GENERAL SCIENCE

26. (C) Roots absorb water and minerals from the soil and stem carries them to the leaves which prepare food for the whole plant. Leaves also carry out the process of gaseous exchange for the plant. Thus, these three parts are very much essential for the survival of the plant. A plant can survive without flowers as they later turn into fruits.

27. (D) Dog is an omnivore that has canine teeth to tear flesh or meat while cow, sheep and camel are herbivores.

28. (C) Duck has broad and flat beak with holes on either side. It takes in muddy water with insects, worms and water plants through its beak. The muddy water flows out through the holes leaving behind plants and insects in the beak.

29. (A) Roughage is a dietary fibre, it does not contain any nutrients and hence does not provide any energy. Vitamins and minerals protect us from various diseases, while roughage does not.

30. (C) A tent can be made using waterproof cloth, wooden poles and rope. They can be fixed or folded very easily.

31. (C) Options (A), (B) and (D) represent guarded rail crossing, school ahead, and men at work respectively. Option (C) shows pedestrian crossing.

32. (A) Playing with broken glass bottle pieces is harmful.

33. (A) Ribcage is an organ of skeletal system. It protects the heart and lungs.

34. (A) Three-fourths of the Earth's surface is covered with water, which gives it a blue colour. So, it is also called as the blue planet.

35. (B) If the Earth is placed in the farthest orbit from the Sun then it will become colder. As the distance between the Sun and the Earth increases, very less sunlight will reach the Earth.

36. (B) After some time, some water will evaporate and the amount of water will become less.

37. (C) Stars and Sun give out their own light.

Moon and the Earth do not have their own light. Moon reflects the light it gets from Sun.

38. (C) In winter season, the days are short and nights are long.

39. (C) Diamond is the hardest material.

40. (C) Lungs take in oxygen and gives out carbon dioxide.

41. (C) Nervous system controls seeing, hearing, learning, thinking and feeling.

42. (B) The correct matching is 1-ii, 2-iii, 3-i

Kidneys excrete urine.

Lungs excrete carbon dioxide.

Skin excrete sweat.

43. (A) Thigh bone is the longest bone in human body.

44. (B) Blood is red in colour and flows throughout human body.
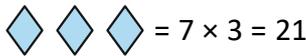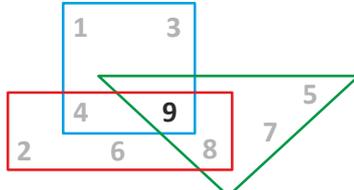
45. (C) In addition to the rock particles, the soil also contains minerals, organic matter, air and water.

46. (B) The water holding capacity is the highest in clayey soil.

47.	(B)	Sandy soil is mostly found on the sea beaches.
48.	(B)	Plants with weak stems that cannot stand upright and spread on the ground are called Creepers.
49.	(C)	Carrot is a modified storage root that stores food in the root system.
		Brinjal is a fruit, bean is a legume and sugarcane is a stem.
50.	(D)	Tuberous roots are the modified roots. These roots are modified to store food material, e.g., carrot, radish.
51.	(D)	Prop roots are adventitious roots that arise from the stem, penetrate the soil, and help support the branches.
		Banyan tree spreads its very long branches over large area. The extra support required for its branches is provided by the prop roots (aerial root).
52.	(C)	Wool is obtained from sheep, yak, rabbit, etc. Cotton is obtained from cotton plant. Silk is obtained from silkworm (insect). Polyester is a man-made fibre obtained from petroleum products.
53.	(C)	Glass is a hard solid which is transparent and can be broken. It is used for making window panes.
54.	(A)	The great bear, orion and leo, all are constellations whereas comet is not a constellation. It is a chunk made up of ice, rocks, dust and gases.
55.	(D)	Both ostrich and emu are flightless birds. Their flight muscles are too weak to support flight, as the body weight of these birds is huge.

CRITICAL THINKING

56. (C)

57. (C)

58. (Delete)

59. (D)

$$\text{star} = \text{diamond}$$

$$\text{star} = 7 = \text{diamond}$$

$$\text{diamond} \; \text{diamond} \; \text{diamond} = 7 \times 3 = 21$$

60. (A)

━━━━ *The End* ━━━━