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NATIONAL LEVEL SCIENCE TALENT SEARCH EXAMINATION (UPDATED)

CLASS - 4
Question Paper Code : UN464

KEY

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

EXPLANATIONS

MATHEMATICS

01. (C) $248 - 14 = 234$

   $234 \div 9 = 26$

   There are 26 baskets of bananas

02. (C) Number of pieces of a tube = 9

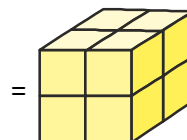   1 piece = 3 m 19 cm

   Length of the tube = 319 cm × 9 = 2871 cm

   = 28 m 71 cm

03. (C) 164 hundreds less than 1700 tens

   $1700 \times 10 - 164 \times 100$

   $17000 - 16400 = 600$

04. (A)

05. (B) 2475 by 6

   $2475 \times 6 = 14850$

   The value of 8 in 14850 is 800

06. (C) 4. 10 p.m – 1 h 20 min

   3h 70 min – 1 h 20 min

   2h 50 min

   i.e 2. 50 p.m

07. (A) 9996 is the largest 4 digit number which is a multiple of 4.

[Tip: If the last 2 digits of a number taken together is divisible by 4, the whole number is divisible by 4. (Here 96 is divisible by 4.)]

10000 is the smallest 5 digit number and it is also divisible b 5.

(Tip: Numbers ending with 0 and 5 are divisible by 5)

9996 + 10000 = 19996

08. (A) 1 kg 500 g − 600 g = 1500 g − 600 g = 900 g

The cake is 900 g heavier than the loaf of bread

09. (C) 10 years old + 2 years = 12 years old

(Aneesh's present age)

Aneesh 12 years old

Father

1 unit → 12 years old

4 units → 12 years old × 4 = 48 years old

10. (C) Cost of each set of 2 T–shirts ₹ 390

Cost of 8 T-shirts → 4 × ₹ 390 (as 8 ÷ 2 = 4) = ₹ 1560

Cost of 10 T-shirts → 5 × ₹ 390 (as 10 ÷ 2 = 5) = ₹ 1950

The least amount of money he needed to buy 8 T-shirts was ₹ 1560. He could not have more than ₹ 1950

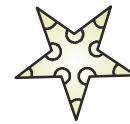Thus, the amount of money he could have possibly had was ₹ 1800.

11. (C) Number of food vouchers sold on the second day

= 67 − 19 = 48

67 + 48 + 67 + 67 = 249

Adya sold 249 food vouchers in the three days

12. (C) Note that a circle does not have any angle. The 'star' given has 10 angles (not 5)

13. (A) 1 m 45 cm − 98 cm = 145 cm − 98 cm = 47 cm

The second piece of wire is 47 cm long

14. (C) $\dfrac{2}{3} = \dfrac{8}{12}$

$\dfrac{5}{6} = \dfrac{10}{12}$

$\dfrac{9}{12} = \dfrac{3}{4}$

15. (B) The total time for Nissi to be ready for school is $\dfrac{1}{2} + \dfrac{1}{4}$

Write fractions with the same denominator

$= \dfrac{2}{4} + \dfrac{1}{4} = \dfrac{3}{4}$ of an hour

16. (B) $\square$ + $\bigcirc$ = 11

$\square$ + $\bigcirc$ + $\bigcirc$ = 18

$\bigcirc$ = 18 − 11 = 7

$\star$ = 12 − 7 = 5

17. (B) Length of the side of each square = 16 ÷ 4 = 4 m

Length of rectangle ABCD = 3 × 4 = 12 m

Breadth of rectangle ABCD = 4 m

12 × 4 = 48 m^2

The area of rectangle ABCD is 48 sq. mts

18. (C) ₹ 800 ÷ ₹ 200 = 4 (groups of 4 files)

4 × 4 = 16

16 + 2 = 18

19. (C) Savings of Karan = ₹ 82

Savings of Meera = ₹ 82 + ₹ 65 = ₹ 147

20. (C) Home to office = 2400 m

Office to home = 2400 m

= 2400 + 2400 = 4800 m

per 1 day → 4800 m

For 6 days = 4800 × 6 = 28800 m

i.e., 28 km 800 m

21. (A) Volume of soup the chef makes every day

= 2 × 1250 = 2500 ml

= 25 × 2500 = 62500

= 62 l 500 ml

The chef makes 62 l 500 ml of soup in 25 days

22. (B) N = 234 × 9 + 8 = 2114

2114 ÷ 7 = 302 R 0

Quotient : 302 ; Remainder : 0

23. (C) 250 min = 240 min + 10 min = 4h 10 min

There are 4h 10 min in 250 min

24. (B) Keep subtracting 5 from 50 until a number is reached that is divisible by 6. 50 − 5 − 5 − 5 − 5 = 30. There were 4 boys (20 cookies) and 5 girls (30 cookies)
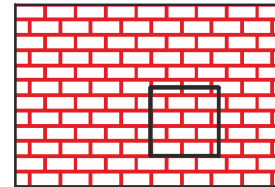
25. (D) They give a remainder of 2 when divided by 3

GENERAL SCIENCE

26. (A) The given mangrove tree grows in marshy areas. Hence it produce roots above the soil to take in air.

27. (B) Q stage in the butterfly lifecycle is called pupa. It undergoes changes to become an adult. The process is called metamorphosis.

28. (A) In case of an electric shock, switch off the mains.

29. (B) Solar energy was converted to light and heat energy.

30. (A) Lamina, midrib, side veins, and stalk are all parts of a leaf.

31. (D) Jupiter is a gassy (mostly made up of hydrogen and helium) planet. It is the fifth planet of the sun. It is the largest planet in the solar system.

32. (A) Living thing labelled as 1 is mushroom. Mushroom is a fungi. Fungi are saprophytes.

33. (D) We can save water by using water from a bucket to take a bath, by repairing dripping taps and by not leaving the tap open while brushing our teeth.

34. (A) In stomach partial digestion of food takes place. In small intestine digested food gets absorbed and in large intestine absorbs water from undigested food.

35. (B) An apple fall down when it gets detached from the tree due to gravitational force.

36. (A) Rotation of earth causes day and night.

37. (A) If you breathe on a mirror, the mirror steams up ... When the water vapor from your breath hits the cold mirror, some of it turns into a liquid. Thousands of tiny droplets of water form on the mirror, and this is called condensation.

38. (C) Rain, snow and sleet are forms of precipitation.

39. (B) A seed sprouting is a stage in plant life cycle.

40. (C) The sharp spines on the cactus help it to keep animals away from the plant.

41. (B) Leaves produce the food for plant. Hence leaves are called kitchen of the plant.

42. (A) Cockroach young one undergoes moulting to form into an adult.

43. (D) Trees provide food, shelter and clean air to the birds and animals.

44. (A) Plants in option (A) is sundew an insectivorous plant, that grow in nutrition deficient soil. Hence, it eats insects and also can make its on food.

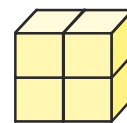45. (D) It is condensed from the water vapour in air.

46. (C) Canine teeth are use to tear its food into shreds.

47. (B) The plant is responding to sunlight.

48. (D) Topsoil has more humus. Hence, it is easier to grow plants healthy in topsoil than in subsoil.

49. (A) Hydro energy : Water : : Solar energy : Sun

50. (A) When the wick of the candle burns, it produces the visible light energy and heat (the transfer of thermal energy from one substance to another).

51. (C) 1: Nitrogen; 2: Oxygen; 3: Other gases

52. (A) Insect X is Butterfly.

53. (A) Squirrel is a mammal. It gives birth to young one.

54. (C) Forests are called as the "lungs of nature" because they maintain balance of oxygen and carbon dioxide in the atmosphere.

55. (B) Body fat help the penguin to survive in the cold environment.

CRITICAL THINKING

56. (C) 4 × 2 = 8 greetings

57. (D) Non black pieces are 5 x 2 = 10 + 2 black pieces = 12 pieces

Non blue piece of papers are 2 black and 4 grey pieces. Total 6 pieces cut half means 6 × 2 = 12 + 6 (blue) = 18

58. (C)

59. (B)

60. (A)

THE END