UNIFIED COUNCIL

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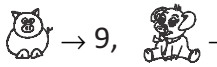
NATIONAL LEVEL SCIENCE TALENT SEARCH EXAMINATION

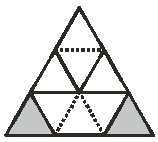
Paper Code: UN436 (UPDATED)

Solutions for Class : 3

MATHEMATICS

1. **(C)** $9 \times 9 = 81$; $8 \times 8 = 64$; $9 \times 8 = \mathbf{72}$

 $\rightarrow 9$, $\rightarrow 8$

2. **(B)** 

$\frac{2}{3} = \frac{6}{9}$; $6 - 2 = \mathbf{4\ parts}$

3. **(C)**

1 13 1 2 4 0 9 −1 7 1 2 6 9 7	5 1 6 2 9 8 − 6 9 7 **5 6 0 1**

4. **(A)** Time when it is actually 3 p.m. is $3 - 0.33 = 2.27$ p.m.

5. **(B)** AB = CD (Since, opposite sides in a rectangle are equal.)

$\therefore$ CD = 2 m

$= 2 \times 100$ cm [Since 1m = 100 cm.]

$= \mathbf{200\ cm}$

6. **(A)** Given $A = \frac{2}{23}$, $B = \frac{11}{23}$,

$C = \frac{5}{23}$ and $D = \frac{3}{23}$.

$A + B = \frac{2}{23} + \frac{11}{23} = \frac{2+11}{23} = \frac{13}{23}$

$C + D = \frac{5}{23} + \frac{3}{23} = \frac{5+3}{23} = \frac{8}{23}$

$\therefore (A + B) - (C + D) = \frac{13}{23} - \frac{8}{23} = \frac{5}{23}$

7. **(A)** 21 tens = 210

82 hundreds = 8200

8200 − 210 = 7990

7990 − 6130 = 1860.

8. **(C)** $30 \times 2 = 60$; $45 \times 2 = 90$

$28 \times 2 = 56$; $35 \times 2 = 70$

Answer is option (C).

9. **(A)** Routes from Bhanu's house to swimming pool:

i) Direct route : 1100 m

ii) Through the school : 359 m + 723 m = 1082 m

iii) Through the super-market : 451 m + 688 m = 1139 m

1139 > 1100 > 1082

$\therefore$ If Bhanu takes the longest route, he would travel 1139 m.

10. **(A)** No. of photos on each page = 9

No. of photos on 42 pages = 42 × 9 = 378

$\therefore$ Tanya pasted total 378 photos.

Answer is option (A).

11. **(C)** $9 \times 4 = 36$

12. **(A)** Total paint in tin = $(2l + 4l + 3l) = 9l$

Paint used by Vaishnavi=

$\left(\frac{1}{2}\text{ of tin X}\right) + \left(\frac{1}{2}\text{ of tin Y}\right)$

$= 1l + 2l = 3l$

$\therefore$ Left out paint = $(9 - 3)l = 6l$.

13. **(C)** $40 \div 5 = 8$ and $2 \times 4 = 8$

$\therefore$ $40 \div 5 = 2 \times 4 = 8$

14. **(D)** 1 km = 1,000 m

10 km = 10,000 m

Now, distance = (10,000 – 1)

m = 9999 m

15. **(D)** 16 blocks 2 kg = 32 kg

16. **(C)** ◯ + ◯ + ◯ + ◯ + △ = 33

◯ + ◯ + ◯ + 12 = 33

So, ◯ + ◯ + ◯ = 33 – 12 = 21 = 7 + 7 + 7

$\therefore$ ◯ = 7

17. **(A)** No. of women in the queue = One forth of 12 = $\frac{1}{4} \times 12 = 3$

18. **(B)** Given, 7 + 2 = 9

70 + 20 = 90

So, 700 + 200 = 900 ...(i)

and 7000 + 2000 = 9000

Given, 700 + □ = 900 ...(ii)

On comparing Eqs. (i) and (ii), we get

□ = 200

Also, ◇ + 2000 = 9000

$\therefore$ ◇ = 7000

$\therefore$ □ + ◇ = 200 + 7000

= 7000 + 200 = 7200

So, option (B) is correct.

19. **(D)** $\frac{1}{3}h = \frac{5}{12}h = \frac{4}{12} + \frac{5}{12} = \frac{9}{12}h = \frac{3}{4}h$

20. **(B)** Options B satisfies his collection.

21. **(B)** 1000 g – (100 g + 200 g) = 700 g

22. **(A)** Option A is 3 dimmensional option (B), (C), (D) are 2 dimmensional.

23. **(C)** $0 \times 18 = 0$

$0 \div 18 = 0$

So $*$ should be replaced by $\times$ or $\div$.

24. **(C)** 100 – 10 = 90

25. **(C)** line CD = 9 – 2

= 7

line AB = 11 – 5

= 6

Total length of line Ab & CD

7 + 6

= 13

26. **(C)** ₹ 150 – ₹ 70 = ₹ 80

27. **(B)** Total no. of marbles = 306

No. of marbles in each box = 4.

$\therefore$ No. of marbles left unpacked

= Remainder of the division $306 \div 4$

$$\begin{array}{r} 4\overline{)306}(76 \\ -28 \\ \hline 26 \\ -24 \\ \hline 2 \rightarrow R \end{array}$$

$\therefore$ 2 marbles were left unpacked.

28. **(D)** When the denominators are the same, the descending order of numerators gives the descending order of the fractions.

29. **(C)** When Nani gives 2 of his markers to Raja both of them have 8 markers each.

30. **(C)** Number of pens Marshall had = Δ

Number of pens Ann had = 14

Product of the number of pens Ann and Marshall have = 56

i.e. $\Delta \times 14 = 56$

So, number of pens Marshall had = $56 \div 14$

$\therefore \Delta = 56 \div 14$

Hence, option (C) is correct.

31. **(A)** The product of any number and zero is always zero.

32. **(A)** Cost of 5 plain + cost of 5 fancy

= (12 × 5) + (16 × 5)

= 60 + 80

= ₹ 140

33. **(D)** 1 kg = 1000 g

$\therefore$ 1000 g – 800 = 200 g

200 g must be added to 800 g

to make it kg.

34. **(C)** time spent on running per day

ropa = 6 : 55 – 5 : 20

= 1h : 35 min

= 95 min

Total time she spends on running in a week

= 95 × 7

= 665 mintues

= 11h 05 min.

35. **(B)** 4 beads should remove from the hundreds place.

36. **(D)** Except option (D) remaining all are odd numbers.

37. **(A)** 8220 + 10 = 8230 > 8220.

38. **(D)** Multiply 2 by 6 and then subtract 9.

39. **(B)** No. of girls who took part in the singing competition = 4233

No. of boys = 4233 – 1029 = 3204

Total no. of participants

= 4233 + 3204 = 7437

40. **(B)** 1 hr 50 min after 7:40 p.m.

= 7 : 40 p.m. + 1 hr 50 min.

= 9 : 30 p.m. + 45 min.

= 10 : 15 pm.

GENERAL SCIENCE

41. **(D)** A mosquito lays its eggs in stagnant water is a characteristic feature that shows mosquito a living thing.

42. **(B)** Coal on burning gives out heat and energy.

43. **(C)** Birds are the only living things with feathers on their bodies.

44. **(C)** Cabbage and spinach are edible leaf part of a plant.

45. **(D)** Nose, windpipe and lungs belongs to respiratory system.

46. **(A)** Figure shown in option (A) is railway crossing.

47. **(D)** Telescope is used to observe the stars and the heavenly bodies in the sky.

48. **(D)** Aquatic animals have gills to breathe, fins and tail to swim.

49. **(D)** In the given figure part labelled as S is a flower. Flower grows into fruit.

50. **(D)** Fruits are formed from flower. Fruits protect seeds.

51. **(D)** In the given table P are producers, Q are herbivores, R are carnivores and S are omnivores. Rat is an omnivore that can be placed in group 'S'.

52. **(C)** Blood carries oxygen to all parts of the body.

53. **(B)** Stem conducts water from the roots to the leaves and food from the leaves to all parts of the plant.

54. **(B)** Paper does not change its state, when heat is applied to it.

55. **(B)** Living things feel. Mimosa plant folds its leaves when someone touches it.

56. **(C)** Crane is a wading bird.

57. **(B)** The sun supplies the energy that drives the water cycle.

58. **(D)** A balance is used to know the weight of a rock.

59. **(A)** A potter use clay soil to make pots.

60. **(B)** X - Mercury, Y - Venus, Z - Earth

61. **(D)** Earthworm is the living part in a garden.

62. **(D)** 

63. **(B)** Woodpecker : wood : : kingfisher : Fish

64. **(D)** Kidneys are the excretory organs that filter blood and removes excretory substances.

65. **(D)** As top soil contains humus, it is more suitable for growth of plants.

66. **(D)** The bending of plant towards light stimulus is the characteristic feature of living things.

67. **(C)** Water evaporates from sea water and forms into water vapour. In the cloud water vapour changes to tiny droplets and falls down in the form of rain.

68. **(B)** Frogs are the animals that can live both on land and in water. Hence they are called amphibian.

69. **(D)** A lotus plant has broad leaves.

70. **(A)** Dogs have a good sense of smell. It identifies by hidden bombs and drugs of the sense of smell.

71. **(D)** Frog, turtle and alligator can live both on land and in water.

72. **(D)** A piece of old rain coat is used to repair a torn umbrella.

73. **(C)** A measuring tape is used to measure the length of the playground.

74. **(A)** Silk and wool are animal fibres.

75. **(B)** Humus is formed by the decomposition of dead plants and animals.

The End