



UNIFIED COUNCIL
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NATIONAL LEVEL SCIENCE TALENT SEARCH EXAMINATION

Paper Code: UN 421

Solutions for Class : 3

Mathematics

1. (A) 11 hrs 11 min after 11:11 p.m.
is 10: 22 a.m.
2. (D) $10 \text{ tens} - 7 \text{ tens} = 100 - 70$
 $= 30$
 $1 \text{ ten} + 12 \text{ ones} = 10 + 12$
 $= 22$
 $5 \text{ tens} - 16 \text{ ones} = 50 - 16$
 $= 34$
 $3 \text{ tens } 5 \text{ ones} - 2 \text{ tens} = 35 - 20$
 $= 15$
 $\therefore 3 \text{ tens } 5 \text{ ones} - 2 \text{ tens}$ gives the smallest value.
3. (B) $9 - 3 = 6$
 $10 - 3 = 7$
 $11 - 3 = 8$
Similarly $12 - 3 = 9$, $13 - 3 = 10$, $14 - 3 = 11$
The rule used in the pattern is to **subtract 3** from the numbers.
4. (C)

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17				
													18	19	20	21	22	23	24	25

$\therefore 25^{\text{th}}$ digit from the right = **3**
5. (D) $4 \times 25 \times 9 = (4 \times 25) \times 9$
 $= 100 \times 9 = \mathbf{900}$

6. (C) $\bigcirc + \bigcirc + \bigcirc + \bigcirc + \triangle$
 $= 33$
 $\bigcirc + \bigcirc + \bigcirc + 12 = 33$
So, $\bigcirc + \bigcirc + \bigcirc = 33 - 12 = 21 = 7 + 7 + 7$
 $\therefore \bigcirc = 7$
7. (B) In $\frac{4}{12}$, the denominator is 12 which is thrice the numerator 4, and the sum of the numerator and denominator is $4 + 12 = 16$.
8. (D) Product of 14 and 18
 $= 14 \times 18 = 252$
 $252 = (31 \times 8) + 4$
 \therefore There are '**31**' **8**'s in the product of 14 and 18.
9. (D) Grapes are measured with the help of a **weighing machine**.
10. (B) 1 hour = **60 minutes**
11. (A) The product of any number and zero is always zero.
It is given that the product of a number and 5 is zero. So, it is evident that the number with which 5 was multiplied is zero.
 \therefore When zero is multiplied with 6 instead of 5, the product will remain as **zero**.

12. (C) The required no. of people who went to the music stall = $217 - 13 = 204$

13. (D) $8p = ₹ \frac{8}{100} = ₹ 0.08$

∴ 8p more than ₹ 28

= ₹ 28 + ₹ 0.08

= ₹ **28.08**

14. (D) $985 \times 8 = 7880$

Also $7880 = 7000 + 800 + 80$

15. (B) $\frac{1}{10}$ is a tenth. So, there are 7 tenths in

$\frac{7}{10}$.

16. (C)
$$\begin{array}{r} 8 \overline{)756} \text{ (94)} \\ - 72 \\ \hline 36 \\ - 32 \\ \hline 4 \end{array}$$

∴ The required quotient lies between **80 and 100**.

∴ Remainder = 4

17. (B)

T	h	H	T	O
4	9	3	8	

Value of 4 in the number 4938 is **4000**.

18. (D) **Gram** is the unit of mass while the other three are units of length.

19. (A) Number of dogs = 3

Number of fish = 8

Number of fish more than dogs = $8 - 3 = 5$

∴ The required number sentence is **$8 - 3 = 5$** .

20. (C) Each horse takes 2 pairs of horse shoes.

Pair of horse shoes to shoe

15 horses = $2 \times 15 = 30$

21. (D) The month of July has 31 days.

Given that it rained on every odd-numbered day.

∴ Number of odd numbers from 1 to 31 = **16**.

22. (C) The largest 5-digit number is 99999.

The sum of its digits = $9 + 9 + 9 + 9 + 9$

= **45**

23. (B) Amount before going shopping

= ₹ 40

Amount after shopping = ₹ 13

∴ Amount spent = ₹ $(40 - 13)$

= ₹ 27

= ₹ 12 + ₹ 15

∴ Things bought are **sketch pens and play dough**.

24. (D) The total number of books in the school library = $786 + 185$

$$\begin{array}{r} \textcircled{1} \quad \textcircled{1} \\ 7 \quad 8 \quad 6 \\ + 1 \quad 8 \quad 5 \\ \hline 9 \quad 7 \quad 1 \end{array}$$

25. (A) **$68 \div 4 = 17$**

$68 + 4 = 72$

$68 \times 4 = 272$

$68 - 4 = 64$

Here, 17 is the least.

26. (A) 7 small squares of the big square (9 = small squares) are NOT shaded.

∴ The required fraction is $\frac{7}{9}$.

27. (B) $28 \times 10 = 280$. So, the required number is **28**.

28. (B) **5312** is the greatest even number that can be formed.

29. (D) 12 months = 1 year

∴ 301 months = $\left(\frac{301}{12}\right)$ years

$$\begin{array}{r} 12)301 \text{ (25)} \\ \underline{24} \downarrow \\ 61 \\ - 60 \\ \hline 1 \end{array}$$

∴ 301 months = **25 years 1 month**

30. (B) $1000 \text{ g} - (100 \text{ g} + 200 \text{ g}) = 700 \text{ g}$
31. (C) Amount saved by Vamsi daily
 $= ₹ 4$
 Total amount saved = ₹ 120
 \therefore No. of days
 $= ₹ 120 \div ₹ 4 = 30$
32. (A) No. of balloons in each package = 4
 No. of packages = 25
 \therefore No. of balloons = $25 \times 4 = 100$
33. (B)
- | | | | |
|-------|---|---|---|
| 1 | 2 | 3 | |
| + | 6 | 8 | 5 |
| <hr/> | | | |
| 8 | 0 | 8 | |
- 700 < 808 < 900**
34. (A) One book is shared by 2 students.
 40 students need $40 \div 2 = 20$ books.
35. (D) $\frac{3}{9} + \frac{6}{9} - \frac{3}{9} = \frac{3+6-3}{9}$
 $= \frac{9-3}{9} = \frac{6}{9} = \frac{2}{3}$
36. (B) $4480 = 4400 + 80$
 So, there are **44 hundreds** in 4480.
37. (B) $100 - 2 = 98$; **$200 - 98 = 102$**
 $400 - 202 = 198$; $586 - 444$
 $= 142$
38. (A) The capacity of a glass = 540 ml
 \therefore The capacity of 9 such glasses
 $= 540 \text{ ml} \times 9 = 4860 \text{ ml}$
 $= 4 \text{ l } 860 \text{ ml}$
39. (D) The required numeral is ₹ **6802**.
40. (A) 3 days before Tuesday is Saturday.
 \therefore Tomorrow is Saturday, hence today is **Friday**.

General Science

41. (D) All living things reproduce.
42. (B) A cow is a herbivore.
43. (C) Steam is gaseous form of water.
44. (B) Changes in the seasons are caused by the revolution of earth around the sun.
45. (B) Skeletal system gives shape and support to our body.
46. (C) Kidneys help to remove wastes from the blood in the form of urine.
47. (D) We should form a queue at the busstop toilets and while getting into a bus.
48. (D) Cloth is measured by using a metre scale or a ruler.
49. (C) Water on heating changes to water vapour
50. (B) The earth takes twenty four hours for one rotation on its own axis.
51. (C) Chlorophyll is the green pigment that is found in leaves. It traps light energy from the sun to prepare food by using carbon dioxide and water.
52. (B) Cud chewing animals bring back the food and chew it well very slowly.
53. (C) Ostrich is NOT a bird.
54. (A) The sun is a star.
55. (A) The man in the given figure is a traffic policeman.
56. (C) Sunlight keeps the room dry and free from germs.
57. (B) Peacock is a bird. Pea in the Peacock is a vegetable and cock is the name of the male hen.
58. (C) The sun is a star. Stars give out their own light.
59. (C) A kutcha house is built by using bamboo, mud, leaves and straw.
60. (A) The skin is the largest sense organ of our body.
61. (A) Flower is the reproductive part of the plant.
62. (D) The given diagram is of a food chain.
63. (D) By the action of the wind, the sun and the rain, rocks are broken into soil.
64. (B) Nervous system helps to know things around us.
65. (C) The weight of the frog is $10 + 10 + 10 + 10 + 1 = 41$ grams.
66. (A) Claws of birds helps in capturing food.
67. (C) Roots absorb water and leaves take in gases from air and absorbs sunlight.
68. (D) Nostril is a part of respiratory system and heart is the part of circulatory system.
69. (A) Lungs receive air through nose and heart receive blood through blood vessels.
70. (C) Leaves help in synthesising the food.

71. **(D)** The flat part of a leaf is called the leaf blade. In the middle of the leaf blade a thin tube with many branches are called veins. The lower side of the leaf has many tiny openings called stomata.
72. **(C)** The animals in the given box are birds they all have feathers.
73. **(D)** Animals depends on other organisms for their food. They consume the food. Plants can make their own food.
74. **(A)** A koel lays its eggs in a crow's nest.
75. **(B)** Soil is the non-living part of the plant.