UNIFIED COUNCIL

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SLSTSE
Test ○Assess ○Achieve

STATE LEVEL SCIENCE TALENT SEARCH EXAMINATION - CODE: US737 (UPDATED)

SOLUTIONS FOR CLASS : 6

MATHEMATICS

1. **(D)** $69.725 - 69.45$

   $= 0.275$

2. **(D)** 587315 is written as 590000 after rounded off to the neearest ten thousands.

3. **(D)** $47 - [(2 + 3) - 3\{4 - 3(7 - \overline{4 - 3})\}]$

   $47 - [5 - 3\{4 - 3(7 - 1)\}]$

   $47 - [5 - 3\{4 - 3(6)\}]$

   $47 - [5 - 3\{4 - 18\}]$

   $47 - [5 - 3\{-14\}]$

   $47 - [5 + 42]$

   $47 - 47 = 0$

4. **(B)** $\dfrac{299}{500} = \dfrac{2.99}{5} \approx \dfrac{3}{5}$

5. **(A)** $x - 5$ = Even number.

   First odd number after $x - 5 = x - 5 + 1 = x - 4$

   Second odd number after $x - 5 = x - 2$

   Third odd number after $x - 5 = x$.

6. **(A)** One digit prime numbers = 2, 3, 5, 7

   Possible four digits odd numbers greater than 5000

   = 5237, 5327, 5723, 5273, 7235, 7325, 7523, 7253.

   ∴ No. of possibilities = 8

7. **(B)** Total no. of triangles of ◺ size = 8

   Total no. of shaded triangle = 2.

   ∴ Fraction of shaded triangle = $\dfrac{2}{8} = \dfrac{1}{4}$

8. **(B)** Take, length = l

   breadth = b

   ∴ Perimeter = $2(l + b) \rightarrow$ ①

   After making l, b double,

   New length = $2l$

   New breadth = 2b

   ∴ New primeter = $2(2l + 2b)$

   $= 2[2(l + b)]$

   $= 2[\text{perimeter}]$

   Hence, perimeter is doubled.

9. **(C)** Total tea after combining both bags

   $= \left(3\dfrac{3}{4} + 24\dfrac{1}{4}\right) \text{kg}$

   $= \left(\dfrac{15}{4} + \dfrac{97}{4}\right) \text{kg}$

   $= \dfrac{112}{4} \text{kg}$

   $= 28 \text{ kg}$

   Amount of tea in 40 bags = 28 kg

   ∴ Amount of tea in 1 bag = $\left(\dfrac{28}{40}\right) \text{kg}$

   $= 0.7 \text{ kg}$

   $= \dfrac{7}{10} \text{ kg}$

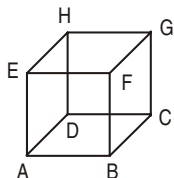10. **(B)** To check divisibility by 77, we should check the divisibility rule of 7 and 11.

From all given options,

Only 523523 is divisible by 11. same number is divisible by 7 and 13 also.

∴ Answer is option (B).

11. **(C)**

 → A cone has 2 faces

 → A cylinder has 3 faces

 → A triangular prism has 5 faces

There are 6 faces for a cube.

12. **(B)** As per the rule,

'C' can be subtracted from 'D' and 'M' only.but we can not subtract 'C' from 'X' and 'L'.

∴ option (B) is wrong.

So, answer is option (B).

13. **(D)** $\dfrac{l}{b} = \dfrac{5}{2} = \dfrac{5x}{2x}$

Now, P = 2(l + b)

= 2(2x + 5x) = 14x

Nos, b = 2x = 4 ⟹ x = 2 cm

⟹ p = 14 x = 14 × 2 = 28 cm

14. **(C)** 17(m − n) = 17m − 17n

15. **(C)** I and II lie on line of symmetry.

II and V also lie on line of symmetry.

Hence I, II & V lie on lines of symmetry.

16. **(B)** Total pupils = 300

120 were boys.

⟹ % of boys = $\dfrac{120}{300} \times 100$ = 40%

40% of boys received free tickets.

17. **(A)** Required L.C.M = $\dfrac{\text{L.C.M. of } (1, 5, 1, 3)}{\text{H.C.F. of } (5, 8, 3, 16)}$

$= \dfrac{15}{1} = 15$

18. **(A)** $b = \sqrt{ac}$

$= \sqrt{(0.32)(0.02)}$

$= \sqrt{0.0064}$

$= \sqrt{(0.08)^2}$

= 0.08

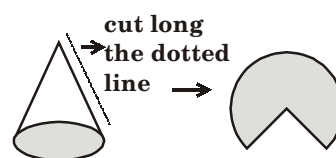19. **(B)** Minimum students in the class = L.C.M. of 6, 8, 10

2	6, 8, 10
2	3, 4, 5
2	3, 2, 5
3	3, 1, 5
5	1, 1, 5
	1, 1, 1

∴ L.C.M. = 2 × 2 × 2 × 3 × 5 = 120

20. **(B)** Angle at a point is 360°

21. **(D)**

22. **(A)** Angle subtended by the end of a chord in the major segment is always acute.

23. **(B)** Total sweets = (19 × 228) = 4332.

Sweets left after giving = 4332 − 519

= 3813

24. **(A)** If number of integers are equal after decimal points then we can say the two terms are like decimal.

25. **(A)** Bar graphs is also known as column graphs.

PHYSICAL SCIENCE

26. **(C)** The accuracy of a measurement can be increased by taking the average of several readings.

27. **(D)** A metre ruler is a standard tool of measurement.

28. **(C)** 1 m = 1000 mm

    $\frac{1}{10}$ m = 100 mm

29. **(D)** Artificial magnets can be made from magnetic materials. Lode stone is a natural magnet.

30. **(C)** Gloves worn by electricians are made up of rubber, because rubber is an insulator.

31. **(A)** The nature of image formed by a pin hole camera is real and inverted.

32. **(A)** Magnets are used as door stoppers.

    Pure stainess steel is not always attracted by magnets.

33. **(D)** In SI unit, length is measured in metres.

    1 m = 1000 mm

    $\therefore$ 5643 mm = $\frac{5643}{1000}$ = 5.643 m.

34. **(D)** If battery is dead, a bulb does not get supply of energy. So, bulb does not glow. If filament is broken also bulb does not glow.

35. **(B)** The reason for filling sealing wax in the space in between the terminals of the bulb is to prevent the contact of terminals with one another.

36. **(B)** Stretching of a spring on suspending a weight is man made and is also reversible.

37. **(D)** Fish tank is fragile, it allows light to pass through it and made up of hard material.

38. **(B)** Water being a good solvent dissolves the dirt and other substances from our clothes and removes them.

39. **(A)** Allows most of the light to pass through them. This is the characteristic property of transparent objects.

40. **(C)** The rain coat is water proof. So, it prevents Mohit from getting wet.

41. **(B)** X – floats in water – plastic.

    Y – sinks in water – silver coin.

42. **(D)** A mixture of husk from grains is separated by winnowing.

    Sieving is a method of separation applied to separate particles of different sizes.

43. **(C)** Water vapour in the air condenses to form clouds.

44. **(D)** The materials given in group 'X' are usually made up of plastic. The materials given in group 'Y' are usually made up of glass.

45. **(C)** Glass gets scratches more easily than plastic, porcelain and metal.

BIOLOGY

46. **(D)** Spinning is drawing yarn (thread) from cotton fibre. This is done on spinning wheel or charkha.

47. **(C)** Mimosa plant is called 'touch-me-not' plant. It is sensitive to touch. It immediately fold its leaves and droop down when we touch.

48. **(B)** Fibres from hemp plant are obtained from the bark or the stem.

49. **(D)** Terrestrial ecosystem includes those organisms which live on land. It is classified into three types - Forest ecosystem, Grassland ecosystem and Desert ecosystem.

50. **(C)** Given figure is of fibrous root. Many small roots arise from the point where the stem touches the ground.

51. **(C)** The given plants are examples of climbers.

52. **(C)** Deficiency of vitamin C causes scurvy. Vitamin C is necessary for keeping gums and joints healthy and building resistance to infections.

53. **(A)** Option 'A' consists of a herbivore (Giraffe), carnivore (houselizard) and an omnivore (rat).

54. **(D)** Fins and tail help the fish to move in water

55. **(D)** Fishes have endoskeleton made of cartilage, scorpion with exoskeleton and earthworm with hydrostatic skeleton.

CRITICAL THINKING

56. **(C)** = 10

 = 6

 = 2

10 + 6 + 2 = 18.

57. **(D)** Varu, Karan, Charan could not get second place because tarun in in second place.
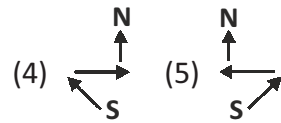
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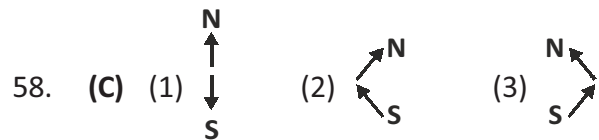
Karan and Varun they both will be together and Karan is in front of Varun

So, _V_ _K_ _T_ ___

obviously Charan will be at 1st place

_V_ _K_ _T_ _C_

Varun is at fourth place.

58. **(C)**

59. **(C)** If you pass the person in the second place then the second place person will take third place and you will be in the second position.

60. **(C)** It provides exercise for the children which is very essential for the development of a health mind and body.

The End