26. A person travelled 61 km in 9 hrs. He travelled same distance foot in 4km/hr & on bicycle in 9km/hr. What is the distance he travelled on foot ?

27. If a circle of radius 7cm is expounded to form a square, what is the side length of square ?

28. Find the area of rectangle whose one side is 6cm & diagonal is 10 cm ?

29. A wheel makes 200 revolutions to cover 44km. Find the radius of the wheel.

30. Find the area of the square whose diameter is 8cm.

31. If a quadrilateral having angles 75^0, 60^0, 80^0, then what is the value of 4th angle ?

32. Perimeter of a squaresized area is 100m. Find the cost of colouring it at the rate of Rs. $\frac{10}{m^2}$

33. Find the median of 25, 39, 22, 15, 20, 40.

34. What is the mean of 29, 30, 35, 61 53, 25.

35. What is the mode of 1,2,3,4,5,1.5

36. Population of state A in 2004 is 70 lakhs & 2005 is 60 lakhs. What is the % of change in population ?

37. What is the probability of getting at most one tail in tossing a coin twice ?

38. What is the probability of getting a sum 13 in throwing a dice twice ?

39. Probability of sample space is _____.

40. From a deck of cards what is the probability of getting an Ace ?

Group - B

2023

Full Marks - 80

Time - 3 Hours.

The figures in the right-hand margin indicate marks.

Answer ALL questions.

Group - A

(1) Answer all questions : [1×40=40

1. Which one is rational 1.4389 _____ or 2 ?

2. If (a,b) is coprime, what is its gcd.

3. If $\frac{1}{2}$ of $\frac{1}{2}$ of a number is 15, then number is _____.

4. The sum of two number is 25 and its subtraction is 07. Find the numbers.

5. Is the number 235932 is divisible by 8 if it is divisible by 4 ?

6. Find the least value of # for which 8550 # 1 is divisible by 9.

7. What is $\left(a^m\right)^n$?
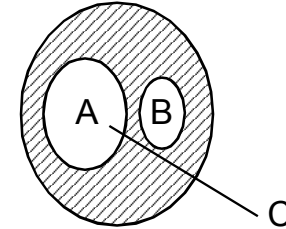
8. The value of $(125)^{-3/5}$ is _____.

P.T.O...

9. Percentage means

   (i) Whole number ×100

   (ii) Whole number

   (iii) Fraction

   (iv) Fraction denominator

10. Divide 240 into 3:2 ratio.

11. Sides of a triangle are in $\frac{1}{2}:\frac{1}{3}:\frac{1}{4}$ ratio. Perimeter is 78cm. Find lengths of all sides.

12. A mixture of 150 lt. Wine f water, contains 20% water. How much more water to be added so that it will contain 25% water ?

13. There are 400 Mangoes & 300 bananas, 10% of Mangoes & 15% of bananas are rotten. Find the % of fruits in good condition.

14. Which relation is right ?

   (i) $CP = \dfrac{100}{100 - P\%} \times SP$

   (ii) $SP = \dfrac{100 - L\%}{100} \times MP$

   (iii) $SP = \dfrac{100 - D\%}{100} \times MP$

   (iv) $D\% = \dfrac{D}{MP} \times CP$

[Cont...

15. A sum of money put at S.I. doubles in 10 years. In how many years it will become 4 times ?

16. Find the interest of 750 with interest of 10% for 2 years ?

17. What is the area of shaded part of AB = 5cm, AC = 10 cm.

18. Area of a triangle of sides 4cm, 5cm, 3cm is ____.

19. All equilateral triangles are isosceles triangle (T/F)

20. A person crosses 600m in 5 mins. What is the speed in Km/hr ?

21. If radius of a cricle increased by 25%, then how much % of area will increase ?

22. A & B takes 8 days, B&C take 12 days and A,B,C take 6 days to complete a work. Then how many days will take A & C to complete it ?

23. Two pipes can fill a tank in 10 & 20 min 8 sec. If both will be used together, how much time will be needed to fill it ?

24. If an object covers a distance at P km/hr. & the same distance at q km/hr , then average speed is ____ ?

25. If two objects are moving in opposite direction at $9m/_s$ & 10m/s. Find their relative speed. *[Cont...*

53. If TEACHER is VGCEJGT, then CHILDREN is _____.

54. Mirror image of ↘ is _____.

55. Mirror image of ANIMAL is _____.

56. Find the total no. of smaller cubes if a 10cm. edged cube is cut into 1cm. edged smaller cubes.

57. In a college 250 physics students, 300 Mathematics, 200 both Physics & Mathematics are there. How many students read either Physics or Mathematics ?

58. Find the mirror images of FLOWER and TEA.

59. All faces of a cube are painted with white colour. Then it is cut into 125 small equal cubes. Then how many cubes are there with one faced colour ?

60. Find the missing numbers 4, 6, 12, 14, 28 _____ , _____.

✷

S - 550

(2) Answer all questions : [2×20=40

41. If Lizard : Reptile then Ostrich : _____.

42. Complete the series 7, 12, 19, 28,_____.

43. Ring : Finger :: Shoe : _____.

44. Attack : Defend :: Cruel : _____.

45. How many terms are there is 201, 208, 215, ... 369 ?

46. Find the 7th term in the series 7,14, 28,........

47. Complete the series WXCD, UVEF, STGH, QRIJ, _____; (i) OPKL (ii) AYBZ (iii) JIQR (iv) None

48. Complete the box.

| ⊛ | ⊛ | ⊛ | ? |

49. ⟲ ⟳ → ? Complete it.

50. Some animals are wild. Show in venn diagram.

51. All women are mothers

All Mothers are sisters.

Reprsent in diagram.

52. Pointing to a girl one said, "Her mother's brother is the only son of my mother's father". How is the girl's mother related to that person ?

[Cont...