(4)
26. A person travelled 61 km in 9 hrs . He travelled same distance foot in $4 \mathrm{~km} / \mathrm{hr} \&$ on bicycle in $9 \mathrm{~km} /$ hr . What is the distance he travelled on foot?
27. If a circle of radius 7 cm is expounded to form a square, what is the side length of square ?
28. Find the area of rectangle whose one side is 6 cm \& diagonal is 10 cm ?
29. A wheel makes 200 revolutions to cover 44 km . Find the radius of the wheel.
30. Find the area of the square whose diameter is 8 cm .
31. If a quadrilateral having angles $75^{\circ}, 60^{\circ}, 80^{\circ}$, then what is the value of 4 th angle?
32. Perimeter of a squaresized area is 100 m . Find the cost of colouring it at the rate of Rs. $10 / \mathrm{m}^{2}$
33. Find the median of $25,39,22,15,20,40$.
34. What is the mean of $29,30,35,6153,25$.
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 $\qquad$ .
40. From a deck of cards what is the probability of getting an Ace ?

## Group - B

## UG-IV - Sem -SEC - 2-(QALT) - <br> Arts/Sc/Com. - (R/B/I)

## 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: $[1 \times 40=40$

1. Which one is rational 1.4389 $\qquad$ or 2 ?
2. If $(a, b)$ is coprime, what is its gcd.
3. If $1 / 2$ of $1 / 2$ of a number is 15 , then number is
$\qquad$ .
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 $\left(\mathrm{a}^{\mathrm{m}}\right)^{\mathrm{n}}$ ?
8. The value of $(125)^{-3 / 5}$ is $\qquad$ -
(2)
9. Percentage means
(i) Whole number $\times 100$
(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 78 cm . 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) $\mathrm{CP}=\frac{100}{100-\mathrm{P} \%} \times \mathrm{SP}$
(ii) $\mathrm{SP}=\frac{100-\mathrm{L} \%}{100} \times \mathrm{MP}$
(iii) $\mathrm{SP}=\frac{100-\mathrm{D} \%}{100} \times \mathrm{MP}$
(iv) $\mathrm{D} \%=\frac{\mathrm{D}}{\mathrm{MP}} \times \mathrm{CP}$
(3)
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 $\mathrm{AB}=5 \mathrm{~cm}, \mathrm{AC}=$ 10 cm .

18. Area of a triangle of sides $4 \mathrm{~cm}, 5 \mathrm{~cm}, 3 \mathrm{~cm}$ is $\qquad$ .
19. All equilateral triangles are isosceles triangle (T/F)
20. A person crosses 600 m 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 $\mathrm{A} \& \mathrm{C}$ to complete it ?
23. Two pipes can fill a tank in $10 \& 20 \mathrm{~min} 8 \mathrm{sec}$. If both will be used together, how much time will be needed to fill it?
24. If an object covers a distance at $\mathrm{P} \mathrm{km} / \mathrm{hr}$. \& the same distance at $\mathrm{q} \mathrm{km} / \mathrm{hr}$, then average speed is
$\qquad$ ?
25. If two objects are moving in opposite direction at $9 \mathrm{~m} / \mathrm{s} \& 10 \mathrm{~m} / \mathrm{s}$. Find their relative speed. [Cont...
(6)
26. If TEACHER is VGCEJGT, then CHILDREN is
$\qquad$ .
27. Mirror image of $\downarrow$ is $\qquad$ .
28. Mirror image of ANIMAL is $\qquad$ .
29. Find the total no. of smaller cubes if a 10 cm . edged cube is cut into 1 cm . edged smaller cubes.
30. In a college 250 physics students, 300 Mathematics, 200 both Physics \& Mathematics are there. How many students read either Physics or Mathematics ?
31. Find the mirror images of FLOWER and TEA.
32. 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 ?
33. Find the missing numbers $4,6,12,14,28$ $\qquad$ _,
$\qquad$ -.
(5)
(2) Answer all questions: $[2 \times 20=40$
34. If Lizard : Reptile then Ostrich : $\qquad$ $-$
35. Complete the series $7,12,19,28$, $\qquad$ .
36. Ring : Finger :: Shoe : $\qquad$ .
37. Attack : Defend :: Cruel : $\qquad$ .
38. How many terms are there is $201,208,215, \ldots \ldots$. 369 ?
39. Find the 7th term in the series $7,14,28$ $\qquad$
40. Complete the series WXCD, UVEF, STGH, QRIJ,
$\qquad$ ; (i) OPKL (ii) AYBZ (iii) JIQR (iv) None
41. Complete the box.

42. $\circlearrowleft \circlearrowleft \rightarrow \quad$ Complete it.
43. Some animals are wild. Show in venn diagram.
44. 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?

