DBSSSV VII, S2,025

All working , including rough work , must be clearly shown and must be done on the same sheet as the rest of the answer .Omission of essential working will result in the loss of marks. The intended marks for questions are given in brackets[].

Question 1

Choose the correct option from the following:

(i) If 10 + 3a = 40, then what number is a ?

(a) 10 (b) 5 (c) 8 (d) 9

(ii) Find the case in which solution set is $\{1,2,3,4,5\}$.

(a) $x \le 6$ (b) x = 6 (c) x > 6 (d) x < 6

(iii) In the given figure, find the value of x:



(a)16° (b) 45° (c) 50° (d) 90°

- (iv) Sum of the interior angles of a triangle is always.
 (a) 160°
 (b) 180°
 (c) 150°
 (d) 100°
- (v) If perimeter of a square is 52 m, find its each side:
 (a) 16 (b) 24 (c) 13 (d) 10
- (vi) The median of 5, 20, 23, 27, 25, 13, 12, 10, 15 is: (a) 15 (b) 12 (c) 25 (d) 13
- (vii) All events have their probability between:(a) 0 and 0.5 (b) 0 and 1 (c) 1 and 2 (d) 2 and 3.
- (viii) Express A= { x: x is a prime number less than 25 } in a roster form:
 (a) {1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11 }
 (b) {2, 3, 5, 7, 11, 13, 17, 19, 23 }
 (c) {1, 2, 3, 5, 7, 11, 17, 19, 23 }
 (d) {2, 3, 5, 7, 11, 17, 19, 23 }
 - (ix) Write the complement of 25° : (a) 65° (b) 45° (c) 50° (d) 155°
 - (**x**) In the given figure, find the value of x:



(a) 10 m (b) 9 m (c) 16 m (d) None of these

Question 2

Fill in the Blanks:

2a

a

The third angle of a triangle having angles 48° and 73° is 						
is the total length of the boundary of a closed plane figure. The mode of 5,6,9,13,6,5,6,7,6,6,3 is The probability of an impossible event is The pythagoras theorem only works on angled triangle. n 3 any 7 questions:						
The mode of 5,6,9,13,6,5,6,7,6,6,3 is The probability of an impossible event is The pythagoras theorem only works on angled triangle. n 3 any 7 questions:						
The probability of an impossible event is The pythagoras theorem only works on angled triangle. n 3 any 7 questions:						
The pythagoras theorem only works on angled triangle. a 3 any 7 questions:						
any 7 questions:						
any 7 questions:						
A man goes 9 m due north and then 12 m due east. How far he is from the starting point?						
i) Construct an angle which is one- fourth of 360°.						
A cricketer scores the following runs in eight innings: 93, 105, 86, 35, 52, 87, 45, 65. Find his average score.						
(iv) In a bag, there are 5 red, 4 blue and 3 white beads. A bead is taken out at random Find the probability that the selected bead is: (a) red (b) blue						
In the given figures, find the measure of unknown angles:						



(vi)	vi) The length of a rectangle is 27 m longer than its breadth. If the perimeter of the				
	rectangle is 110 m, then find its area.				
(vii)	(a) Express {11,22,33,44,55} in a set-builder notation	[2]			
	(b) Express "The set of integers between -2 and 5" in roster form				
(viii)	The angles of a triangle are in the ratio $5:3:4$. Find the angles.	[2]			

(ix) Solve 7x - 4 < 2x + 16, $x \in W$ and represent their solution sets on the number line. [2]

Question 4

Answer any 5 questions:

(i)	(a) The value of x that satisfies the linear equation $2x + 4(x - 1) = 5x$ is:	[3]
	(b) A number is multiplied by 9 and then 11 is added to the product. If the final	
	result is 56, find the number.	

(ii) (a) Calculate the length of the diagonal of a rectangle whose sides are 8cm and 6cm.

(b) If 2 angles are supplementary and one angle is 20° less than three times the other angle, find the angles.

(iii) A tree is broken at a height of 5 m from the ground such that the top of the tree [3] touches the ground at a distance of 12 m from the base of the tree (as shown below). What was the original height of the tree?



(iv) (a) Construct triangle ABC, where $AB = 5 \text{ cm } BC = 4.5 \text{ cm and } <ABC = 60^{\circ}$ (b)From the given figure, find <a , <b, and <c :

[3]

[3]



- (v) The length and breadth of a rectangular field are 230 m and 120 m respectively.Find [3] the perimeter of the field and cost of fencing it at ₹ 20 per meter.
- (vi) (a)The number of goals scored by a football team in different matches are:3, 1, 0, 4, [3]
 6, 0, 1, 1, 2, 2, 3, 5, 1, 2, 0, 1, 0, 2, 3, 9, 2, 0, 1, 0, 1, 4, 1, 0, 2, 5, 1, 2, 3, 0. Find the range of the data and construct a frequency distribution table.
 - (b)State whether the given set is a finite set, infinite set or null set. A={Odd number divisible by 2}.
- (vii) (a) The following table gives birthdays of 40 children in a year. Illustrate the data [3] by a bar graph.

Days	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Number of							
Children	7	3	8	11	3	2	6

(b) Solve 4x - 5 = 11 and verify your answer.
