

ATP Education
UNIT TEST PAPER
Mathematics – XI (Chapter – 1.Set)

Timing: 1 Hour

Set – 1

Maximum Marks: 20

One-Mark Questions:

1. List all the element of the set $A = \{x : x \text{ is an integer } x^2 \leq 4\}$
2. Write down the all subsets of the set $\{1, 2, 3\}$
3. Write the following as interval (i) $\{x : x \in \mathbb{R}, -4 < x \leq 6\}$ (ii) $\{x : x \in \mathbb{R}, 3 \leq x \leq 4\}$
4. If $A = \{3, 5, 7, 9, 11\}$, $B = \{7, 9, 11, 13\}$, $C = \{11, 13, 15\}$ Find $(A \cap B) \cap (B \cup C)$
5. Write the set $\{2, 4, 8, 16, 32\}$ in set builder form.

Two-Marks Questions:

6. Draw the venn diagram for $(A \cup B)'$.
7. Let A, B and C be three sets $A \cup B = A \cup C$ and $A \cap B = A \cap C$ show that $B = C$

Three-Marks Questions:

8. If $U = \{a, e, i, o, u\}$ $A = \{a, e, i\}$ And $B = \{e, o, u\}$ $C = \{a, i, u\}$ Then verify that
 $A \cap (B - C) = (A \cap B) - (A \cap C)$

Four-Marks Questions:

9. In a town of 10,000 families, it was found that 40% families buy newspaper A, 20% families buy newspaper B and 10% families buy newspaper C. 5% families buy A and B, 3% buy B and C and 4% buy A and C. If 2% families buy all the three papers.

Find the no. of families which buy

(i) A only

(ii) B only

(iii) none of A, B, and C.

10. In a group of 65 people, 40 like cricket, 10 like both cricket and tennis. How many like tennis only and not cricket? How many like tennis?