

ATP Education

UNIT TEST PAPER

Mathematics – XI (Chapter – 1.Set)

Timing: 1 Hour

Set – 2

Maximum Marks: 20

One-Mark Questions:

1. Write the solution set of the equation $x^2 + x - 2 = 0$ in roster form.
2. Write the set $A = \{1, 4, 9, 16, 25, \dots\}$ in set-builder form.
3. List all the elements of the set $D = \{x : x \text{ is a letter in the word "LOYAL"}\}$
4. Write down all the subsets of $\{a, b, c\}$.
5. Write the intervals in set-builder form $(6, 12)$.

Two-Marks Questions:

6. Let $A = \{1, 2, 3, 4, 5, 6, 7, 8, 9, 10\}$ and $B = \{2, 3, 5, 7\}$. Find $A \cap B$ and hence show that $A \cap B = B$.
7. Let $A = \{1, 2, 3, 4, 5, 6\}$, $B = \{2, 4, 6, 8\}$. Find $A - B$ and $B - A$.

Three-Marks Questions:

8. If $U = \{1, 2, 3, 4, 5, 6, 7, 8, 9\}$, $A = \{2, 4, 6, 8\}$ and $B = \{2, 3, 5, 7\}$. Verify that $(A \cup B)' = A' \cap B'$

Four-Marks Questions:

9. Let U denote the universal set consisting of individuals suffering from the skin disorder, A denote the set of individuals exposed to the chemical C_1 and B denote the set of individuals exposed to the chemical C_2 .
10. In a survey it was found that 21 people liked product A , 26 liked product B and 29 liked product C . If 14 people liked products A and B , 12 people liked products C and A , 14 people liked products B and C and 8 liked all the three products. Find how many liked product C only.