

SAMASEERKALVI – 9th STD

THEORY OF SETS

Time: 20 minutes]

[Marks: 15

SECTION I

Note: Answer all 10 questions by choosing the correct one.

10 X 1 = 10

- If $A = \{p, q, r, s, t\}$ and $B = \{3, 6, 9\}$. Fill in the blank with correct symbol. A _____ B
 A) \in
 B) \notin
 C) \subset
 D) \subseteq
- If $P \subset A$, then set A is called
 A) the sub set of P
 B) the super set P
 C) the proper sub set of P
 D) the improper set of P
- The elements of $A = \{x : x \text{ is } -2 \leq x < 7\}$ are
 A) $\{-2, -1, 0, 1, 2, 3, 4, 5, 6, 7\}$
 B) $\{-2, -1, -0, 1, 2, 3, 4, 5, 6, 7\}$
 C) $\{-2, -1, 0, 1, 2, 3, 4, 5, 6\}$
 D) $\{-2, -1, 0, 1, 2, 3, 4, 5, 6, 7, 8\}$
- Pick out the correct statement from the following:
 A) The cardinal number of an infinite set is not a finite number.
 B) The cardinal number of an infinite set is a finite number.
 C) The cardinal number of a finite set is not a finite number.
 D) The cardinal number of a finite set is an infinite number.
- Set $A = \{0\}$ is
 A) a Singleton set
 B) a Null set
 C) an Empty set
 D) an infinite set
- Set $P = \{x : x \text{ is odd prime and } 7 < x < 11\}$, then set P is
 A) a Singleton set
 B) a finite set
 C) a non – Empty set
 D) an infinite set
- If $A = \{5, 6, 7\}$, then the number of proper of subsets of set A is
 A) 3
 B) 7
 C) 9
 D) 8
- If $P = \{a, e, i, o, u\}$ and $Q = \{x : x \text{ is a consonant of English alphabet}\}$, then P and Q are
 A) equal sets
 B) equivalent sets
 C) disjoint sets
 D) infinite sets
- Pick out the equivalent sets
 A) $\{2, 3, 4, 9\}$
 B) $\{5, 7, 10, 15, 17\}$
 C) $\{4, 3, 9, 2\}$
 D) $\{0, 1, p, q, s\}$
- Which of the following are correct?
 A) $(A \cap B) \subset A$
 B) $(A \cap B) \subseteq A$
 C) $(A \cap B) \subseteq B$
 D) $(A \cup B) \subset A$
- Pick out the wrong statement from the following:
 A) $n(A) + n(A') = n(U)$
 B) $n(A \cup B) = n(A) + n(B)$ when $n(A \cap B)$ is a finite set.
 C) $n(A) = n(A - B) + n(A \cap B)$
 D) $n(B) = n(B - A) + n(A \cap B)$

