DAYANANDA SAGAR COLLEGE OF ENGINEERING
(An Autonomous Institute Affiliated to VTU, Belagavi)
Shavige Malleshwara Hills, Kumaraswamy Layout, Bengaluru-560078
DEPARTMENT OF MATHEMATICS

COURSE: MAHEMATICAL STRUCTURES

COURSE CODE: 21MAT41A

MODULE – 1: Set Theory and Number Theory

Multiple Choice Questions

Q.No.	Questions
1.	The set $A = \{x: x \text{ is real number between 1 and 2 }\}$is a _____. (a) Finite set (b) Infinite set (c) Empty set (d)None of the mentioned
2	Two sets are called disjoint if their _____ is an empty set. (a) Union (b) Difference (c) Intersection (d)Complement
3.	Power set of empty or null set has exactly _____ subset. (a) One (b) Two (c) Zero (d) Three
4.	The members of the set S = {x | x is the square of an integer and x < 100} is _____ a) {0, 2, 4, 5, 9, 55, 46, 49, 99, 81} b) {1, 4, 9, 16} c) {0, 1, 4, 9, 16, 25, 36, 49, 64, 81} d) {0, 1, 4, 9, 25, 36, 49, 123}
5.	For any non-empty sets, A, B, C we have $A\ X\ (B\ \cup C) =$ _____ . $(a)(A \cup B)X(A \cup C)$ $(b)A \cup (BXC)$ $(c)(AXB) \cup (AXC)$ (d)None of these
6.	If n(A) = 20 and n(B) = 30 and n(A U B) = 40 then n(A ∩ B) is? a) 20 b)30 c) 40 d) 10
7.	Which of the number is not allowed in binary representation of a number? a) 0 b) 1 c) 2 d) None of these
8.	Hexadecimal number equivalent of decimal 10 is? a) 10 b) A c) F d) None of these
9.	The composite numbers have a) more than two factors b) infinite factors c) one factor d) two factors
10.	The smallest prime number is a) 4 b) 2 c) 3 d) 5