

# **Subject: Theory of Computation**

## **SYBSc. CS - Semester III** **ASSIGNMENT**

### **ASSIGNMENT 1**

**All questions are compulsory**

1. What is Theory of Computation? Explain its Importance.
2. Explain the mathematical foundation with respect to sets in Theory of Computation
3. What are functions? Explain its types.
4. Write a short note on proof technique.
5. What is automaton? Explain its key components

### **ASSIGNMENT 2**

**All questions are compulsory**

1. Write a short note on transition system.
2. Explain NFA and DFA
3. Design a DFA that accepts any string over  $\{a,b\}$  that contains string aabb in it.
4. Difference between MOORE machine and mealy machine.
5. Construct a DFA that accepts sets of all strings over  $\{0,1\}$  of length 2