**MACHAKOS UNIVERSITY**

**SCHOOL OF ENGINEERING AND TECHNOLOGY**

**DEPARTMENT OF CIT**

**SCO 211 – AUTOMATA THEORY**

**ASSIGNMENT/PROJECT**

**Date of Submission WEEK 13**

**Assignment**

**Dennis Kibet J17-5580-2020**

MU cafeteria has installed an ice cream vending machine to automatically dispense ice cream to students and staff. The cost of a can of ice cream is Kshs 60 and the machine only accepts coins in the denomination of 20 & 40 only and the machine does not give change.

Assignment

a) Formally define this machine as a finite automata. i.e., determine the states, alphabet and the transition function.

b) Draw the state transition diagram for the machine.

c) Using a programming language of your choice, write a program to simulate the operation of this machine.