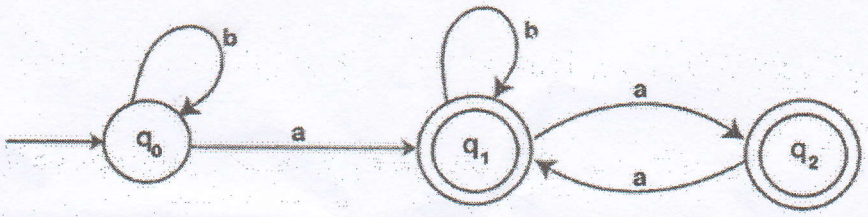
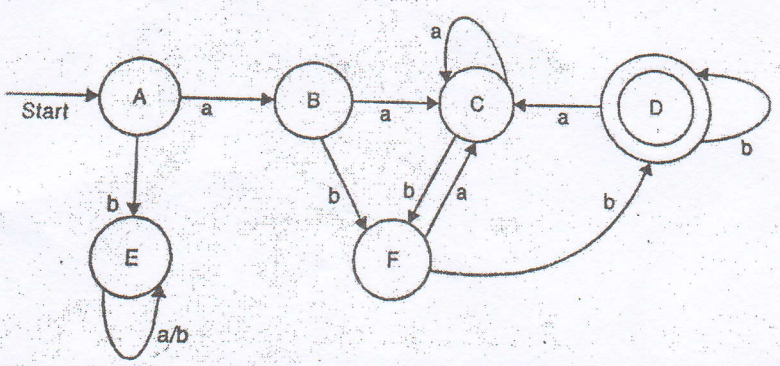
SOMAIYA VIDYAVIHAR UNIVERSITY

Semester: January 2022 – May 2022 Examination: In-Semester Examination		
Programme code: 01 **Programme: B. Tech Computer Engineering**	**Class: SY**	**Semester: IV** **(SVU 2020)**
Name of the Constituent College: **K. J. Somaiya College of Engineering**	**Name of the department:** COMP	
Course Code:116U01C404	**Name of the Course: Theory of Automata with Compiler Design**	

Question No.		Max. Marks
Q1 a)	Find the RE equivalent to the following transition diagram:-  	5
Q1 b)	Convert the given regular expression into an ϵ-NFA RE = (a+b)* abc (a+b)*	5
Q2	Minimize the given DFA  	10
Q3 a)	Prove that the following language is not Regular. $L=\{a^n b^n c^n \mid n>=1\}$ OR Construct DFA for the binary language having strings ending with 011. Also check the acceptance of the string "110011".	5
Q3 b)	Illustrate the Different phases of Compiler with suitable diagrams. OR Justify the Closure Property for Regular Languages for the following Operation:- a) Union b) Homomorphism	5