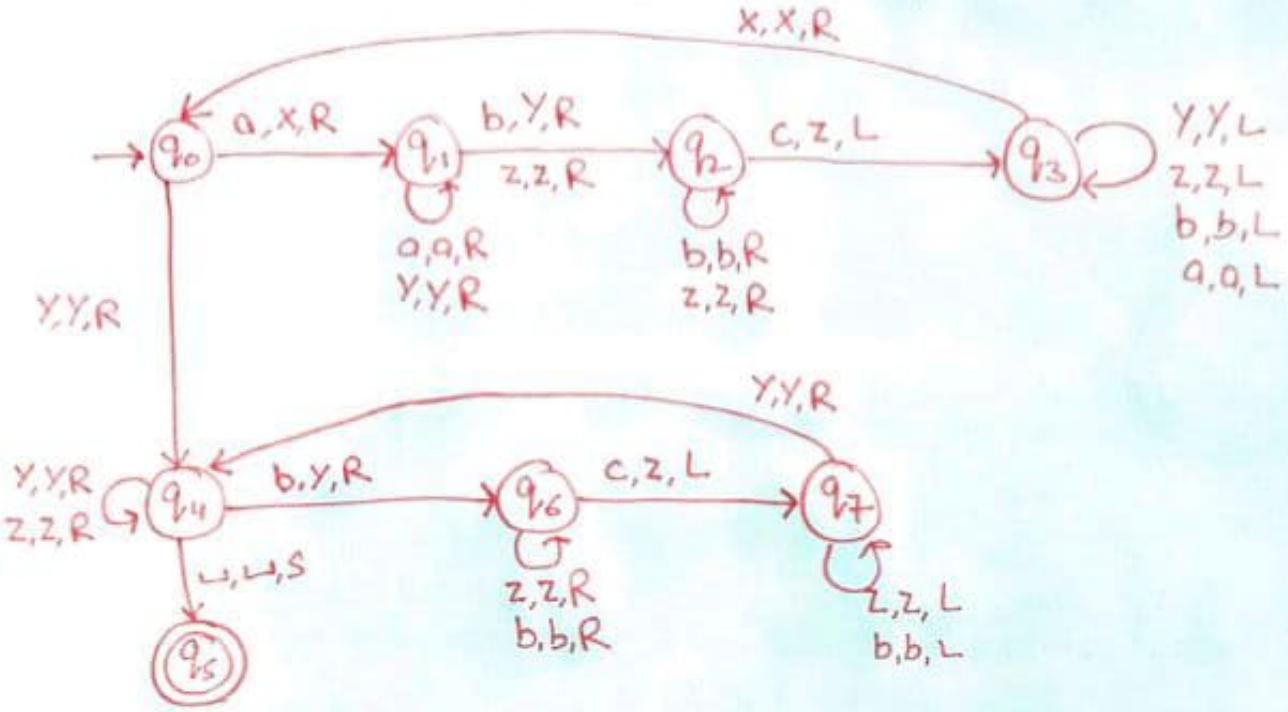
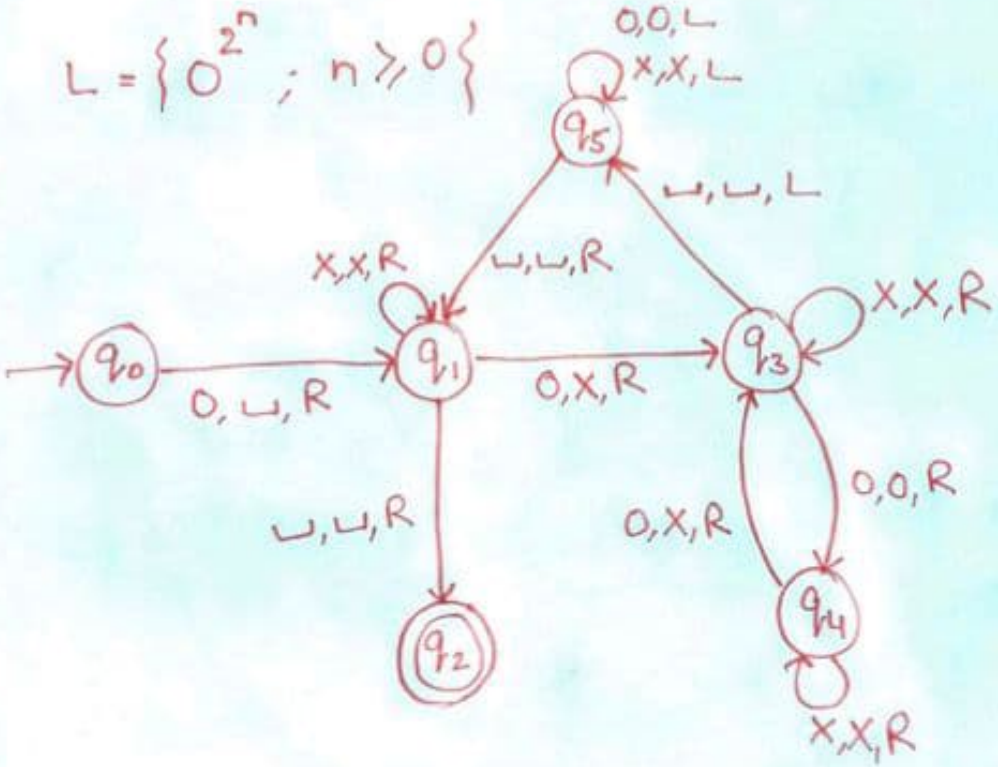
$L = \{ a^i b^j c^k \; ; \; i \geq 1, j \geq 1 \; \& \; k = \max(i,j) \}$



$L = \{ 0^{2^n} \; ; \; n \geq 0 \}$



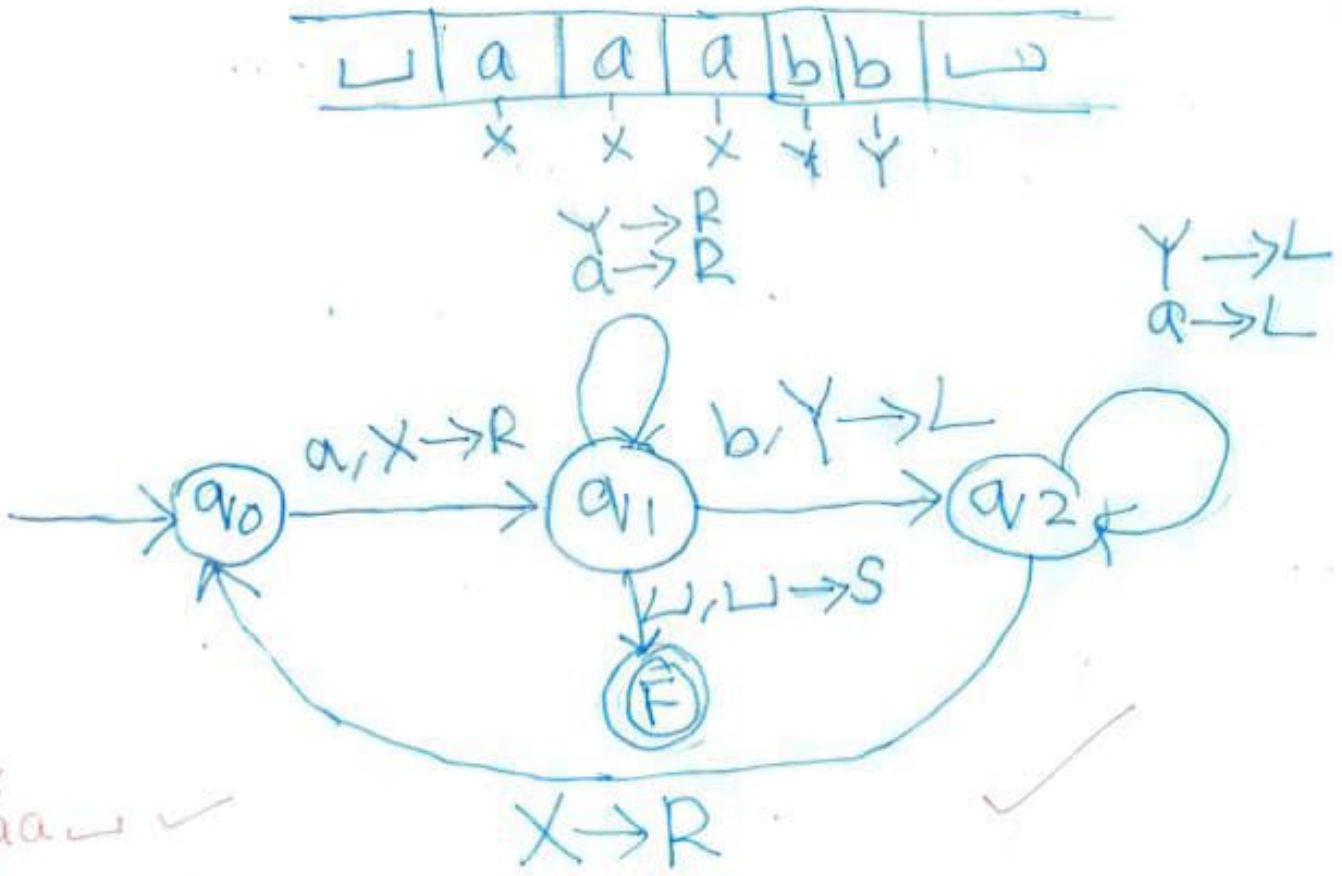
National University of Computer and Emerging Sciences, Lahore Campus

Course:	Theory of Automata	Course Code:	CS-3002
Program:	BS (Computer Science)	Semester:	Spring 2024
Duration:	~20 Minutes	Total Marks: / Weight	10 / 10
Paper Date:			
Section:	6 C	Page(s):	1
Exam:	Quiz 4	Roll No.	21L-7605

Q1: Design a Single Tape Turing Machine for the following language Mustaqim Afzal

$$L = \{a^i b^j \mid i>j\}$$

aaabb



X
␣aa␣ ✓
␣a␣ ✓
X

␣aab␣ ✓
XXY

␣abb␣ ✓
XY

aa bb X
XX Y

✓ aab
XXY

National University of Computer and Emerging Sciences, Lahore Campus

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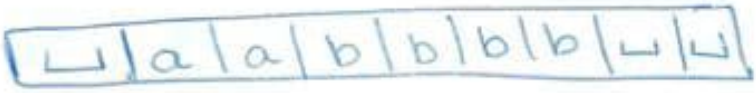
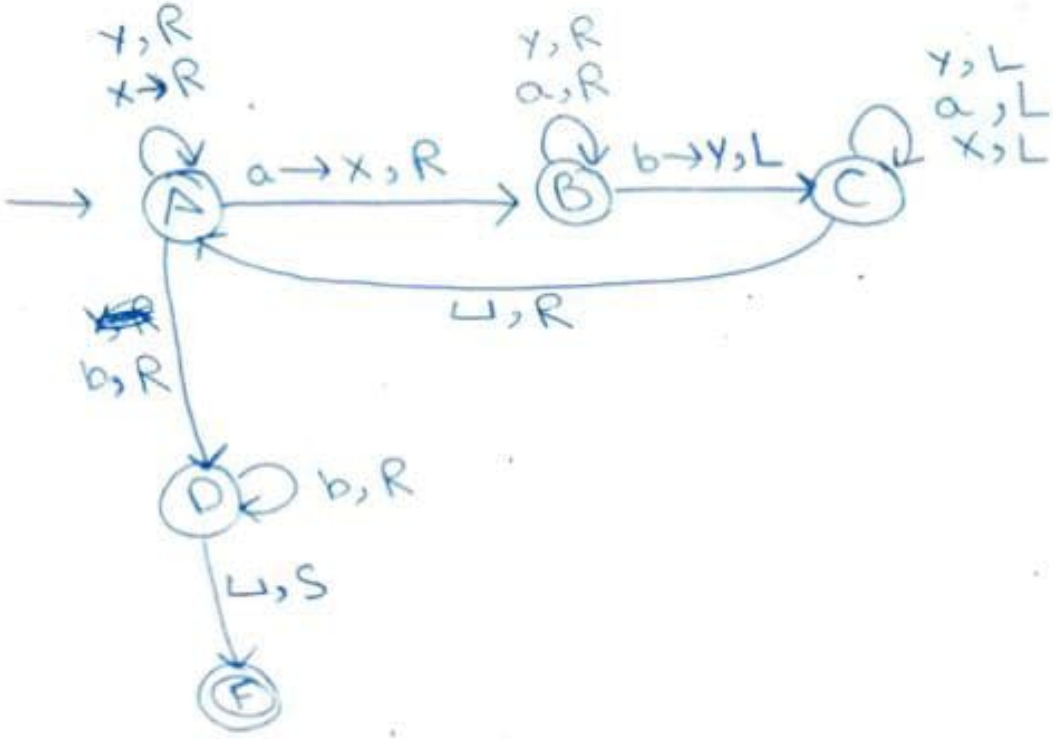
Paper Date:		Weight	10
Section:	6C	Page(s):	1
Exam:	Quiz 4	Roll No.	20L-2918

Umair Butt

Q1: Design a Single Tape Turing Machine for the following language

$$L = \{a^i b^j \mid i<j\}$$





␣ b ␣

␣ a b b b ␣
X Y

␣ a b ␣
X X Y