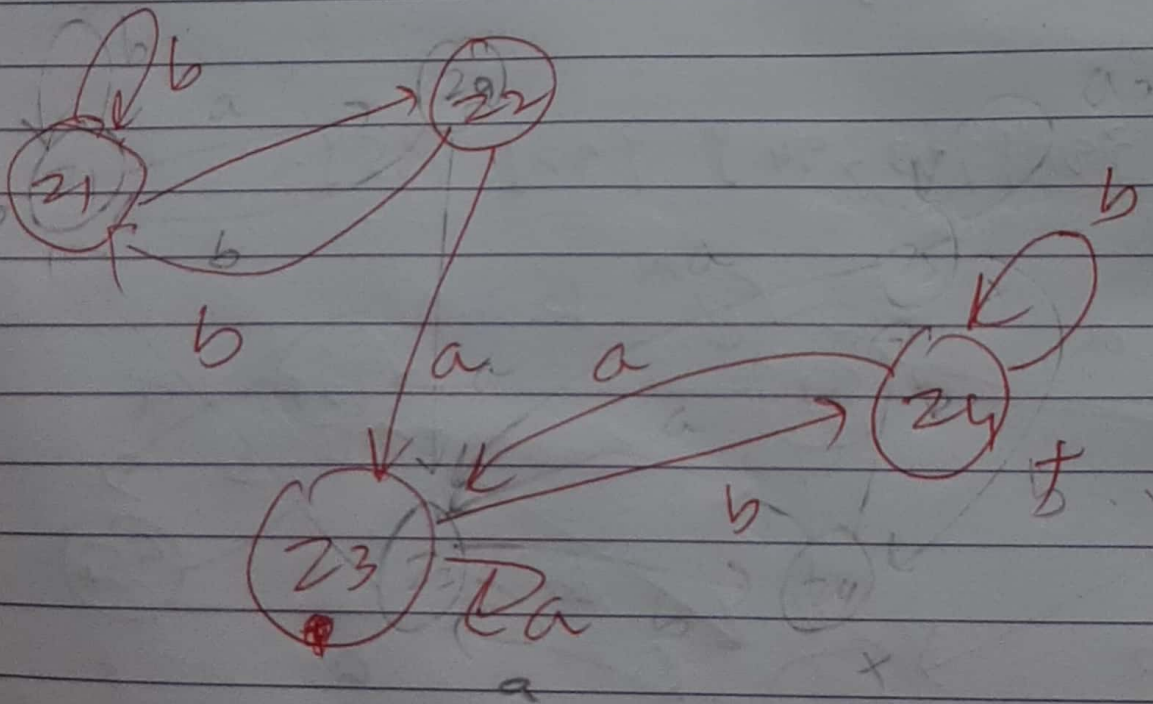


Q1(b):-

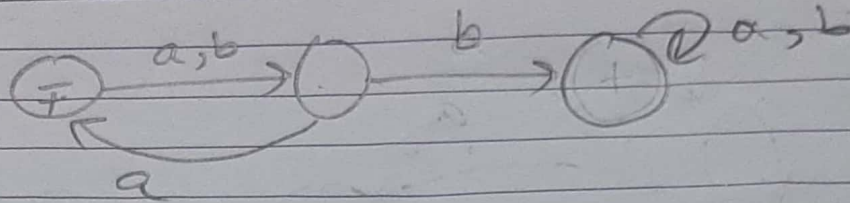
Next states	old states	
	a	b
$y_1 \equiv z_1$ ✓	$y_2 \equiv z_2$	$y_1 \equiv z_1$ ✓
$y_2 \equiv z_2$	$(y_3, x_1) \equiv z_3$	$y_1 \equiv z_1$
$(y_3, x_1) \equiv z_3$	$(y_3, x_1) \equiv z_3$	$(y_3, x_1, x_2) \equiv z_4$
$(y_3, x_1, x_2) \equiv z_4$	$(y_3, x_1) \equiv z_3$	$(y_3, x_2) \equiv z_5$
$(y_3, x_2) \equiv z_5$	$(y_3, x_2) \equiv z_3$	$(y_3, x_1, x_2) \equiv z_4$



Date: _____

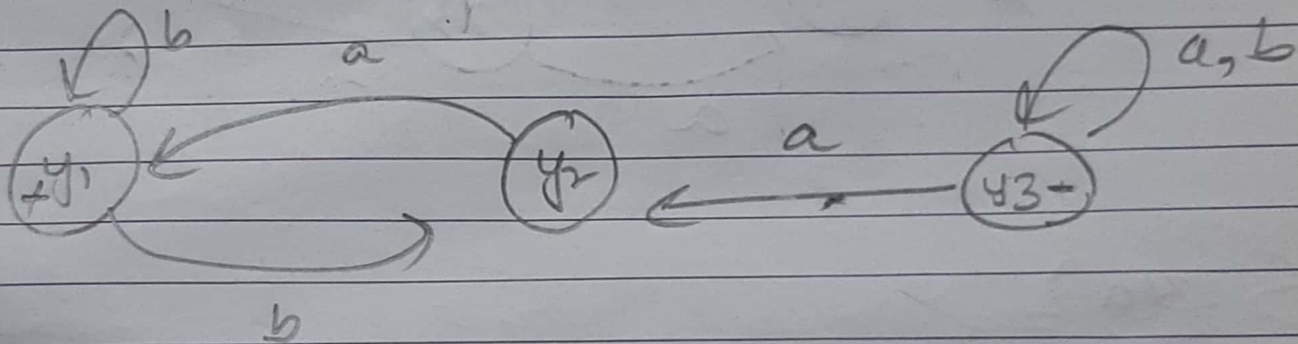
Sun Mon Tue Wed Thu Fri Sat

Q:1(c):-



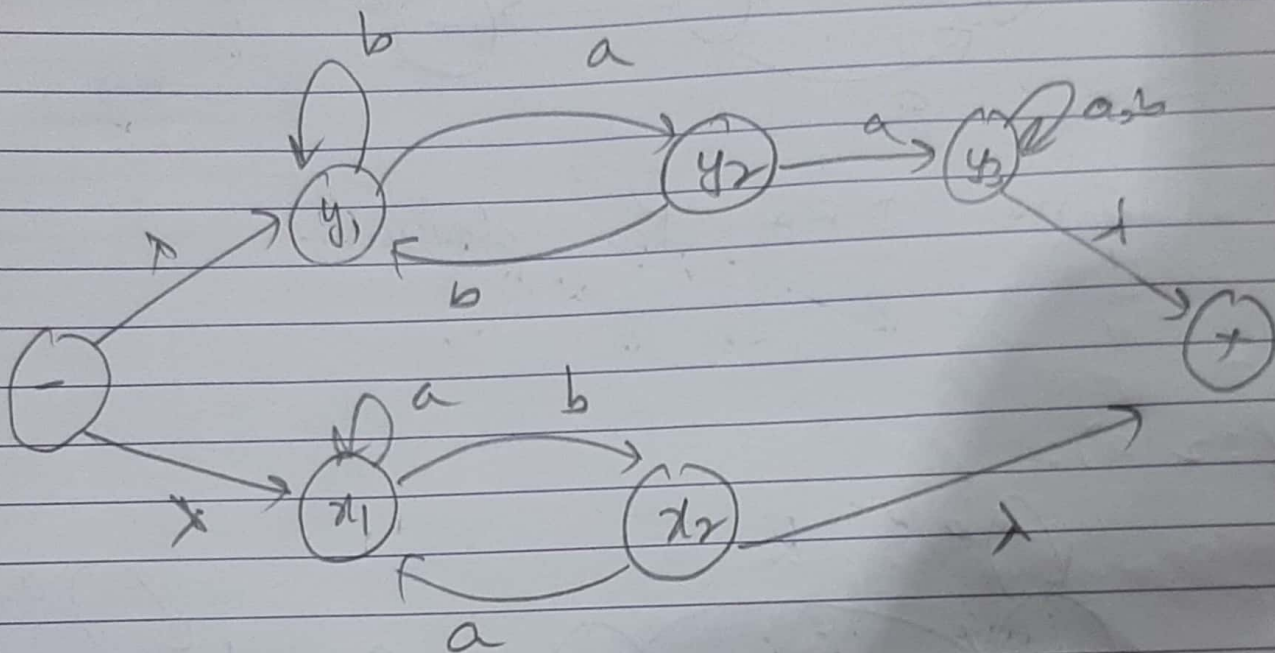
Same D.F.A for closure -

Q:2(a):-



Q:2(b)

Q: 2(b):-



Q: 3(a)

$$L = a^n b^{n+m} c^m$$

$$\text{let } n = 4, m = 2$$

$\underbrace{aaaa}_x \underbrace{bbbbb}_y \underbrace{cc}_z$

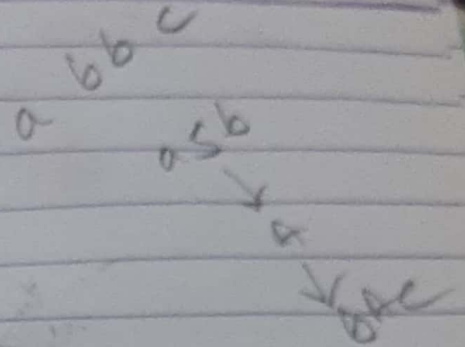
$xy^2z = a bbb bbb cc$ is not
 part of lang so disproof.

Date:

Sun Mon Tue Wed Thu Fri Sat

$$L_2 = a^n b^{2n+6}$$

$$n=3$$



$$\begin{array}{c} a a a \\ \hline n \quad y \end{array} \quad \begin{array}{c} b b b b b b b b b b b b \\ \hline 2 \end{array}$$

$$x_{g^2} = a b b b b b b b b b b b$$

disprovered not part of language

Q3(b)

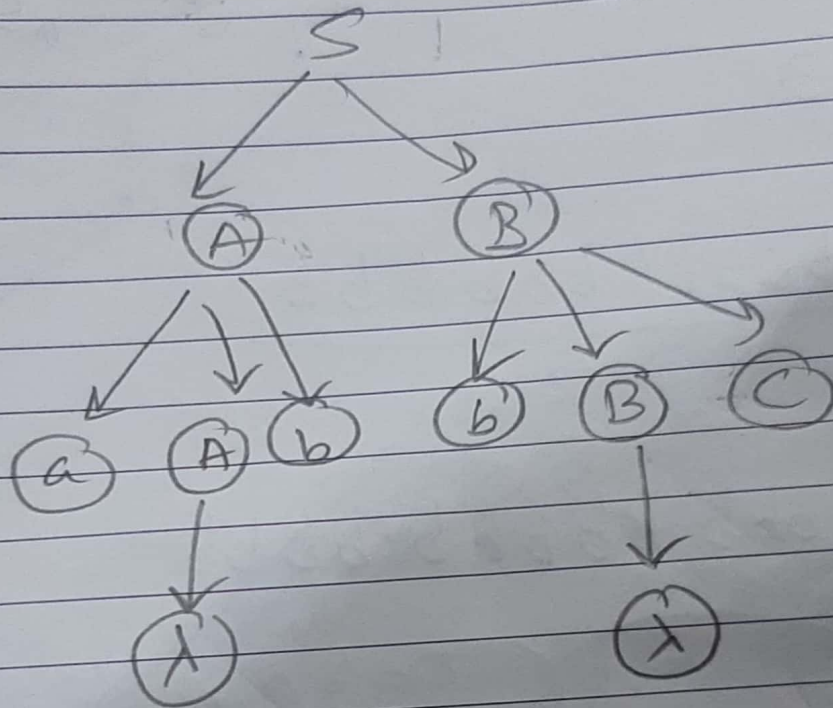
$$L_1 =$$

$$S \rightarrow A B \mid A \mid \lambda$$

$$A \rightarrow a A b \mid \lambda$$

$$B \rightarrow b B c \mid \lambda$$

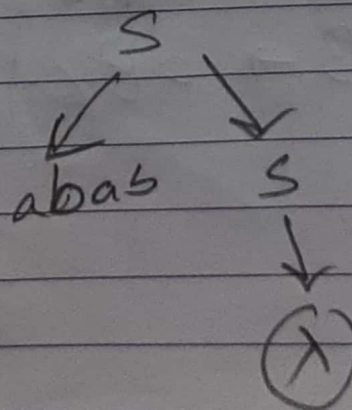
Derivation Tree $abbc$



$$L_2 = \{aby^{2n} : n \geq 0\}$$

$$S \rightarrow ababs \mid \lambda$$

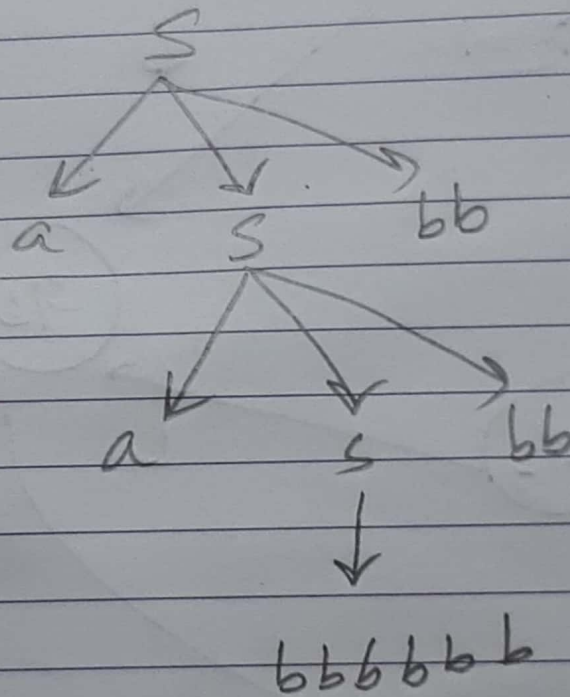
Derivation Tree for



$$L3 = a^n b^{2n} b : n \geq 0$$

$S \rightarrow aSbb \mid bbbbbb$

Derivation tree for $aa bbbbbb b$



Q.4

