Aditya Kvití TE: IT-A ROLL No: G1

Subject :- AT Experiment / Tutorial / Assignment No. :- G Page :-	1
2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	
$(a.1) L = \{a^m b^n c^{m+n} \mid m, n > 1\}$	
0 = {20, 21, 22, 23, 2f}	
$\Sigma = \{a, b, c\}$	
$ \begin{cases} $	
Zo = \$ Z 3	
$F = \{2f\}$	
(i) For each a' , push $A:$ $8(20, a, z) = (21, AZ)$	
S(2, a, A) = (2i, AA)	
(2) For each 'b', push B: 8 (91, b, A) = (92, BA)	
$\delta(92, b, B) = (92, BB)$	
3) For each 'c', pop A/B: 8 (92, C, B) = (93, E)	
S(93, c, B) = (93, E)	
8 (23, c, A) = (23, E)	
$\Theta = \delta(93, \xi, Z) = (9f, Z)$	
6(13, 2, 2)	
$\rightarrow (90) \xrightarrow{0, 2/AZ} (91) \xrightarrow{0, A/BA} (92) \xrightarrow{c, B/E} (93) \xrightarrow{\varepsilon, 2/Z} $	20)
b, B/BB c, B/E	
a, h/AA c, A/E	
Diagrams are optional to draw for all sums	
Diagrams are optional to draw for all sams	

	Subject :- AT Experiment / Tutorial / Assignment No. :- 6 Page :- 5	2
0.2)	$L = \{ (ab)^n c^n \mid n > 1 \}$	
	$Q = \int_{0}^{1} Q_{0}, Q_{1}, Q_{2}, Q_{3}, Q_{4}$ $Z = \int_{0}^{1} a_{1}, b_{1}, c_{3}^{2}$	
	T = { Z, B } 20 = { 20 }	
	$Z_0 = \{Z\}$ $F = \{2f\}$	
0	for 1st 'ab', push 13: δ(90, α, Z) = (9, Z)	
	$S(21, b, 2) = (22 \cdot 3 \cdot 2)$	
(2)	Fox remaining 'ab', push B: 8 (92 a, B) = (91, B) 8 (91, b, B) = (92, BB)	
3	For each 'c', pop B: $\delta(92, C, B) = (93, E)$ $\delta(93, C, B) = (93, E)$	
9	8(93 E, Z) = (9f, Z)	
	+ (q ₀) α, Z/Z, (q ₁) b, Z/BZ, (q ₂) c, B/ε, (q ₃) ε, Z/Z, (q ₁) c, B/ε, (q ₃) ε, Z/Z, (q ₁) c, B/ε	90
	a, B/B	

	Subject :- AT Experiment / Tutorial / Assignment No. :- 6 Page :- 8
<u>(4.3)</u>	8→ a Sa / 686 /c
	AS it is not in CINF form we need to make it first in CINF form.
	: 5-7 aSA/6SB/c A-7 a
	$B \rightarrow b$ $\therefore Q = \begin{cases} 90, 91, 94 \end{cases}$
	$\Sigma = \{a, b, c\}$ $\Gamma = \{Z, S, A, B, a, b, c\}$ $\{a, b, c\}$ $\{a, b, c\}$ $\{a, b, c\}$ $\{a, b, c\}$ $\{a, b, c\}$ $\{a, b, c\}$
0	Posh start symbol 's' to the stack: 8 (90, E, Z) = (71, 82)
2	For s -> aSA / bSB /c 8(91, 2, 5) = { (91, aSA), (91, bSB), (91, c)}
3	For A - on & B - ob 8 (91, 2, A) = (91, a) 8 (91, 2, B) = (91, b)
<u> </u>	For input symbols: 8(21, a, a) = (21, 2) 8(21, b, b) = (21, 2)
	8 (91, c, c) = (91, E).
(S)	S(21, 2, Z) = (21, Z)

π i	Subject :- AT Experiment / Tutorial / Assignment No. :- 6 Page :- 4
a ·4)	S-7 a A A
	A -> aS / bS / a
	$Q = \{20, 21, 94\}$
	$\Sigma = \{a, b\}$
	$\Gamma = \{Z, S, A, a, b\}$
	$20 = \{20\}$
	Zo = {Z3
	F = {2f}
	es demonstration of the contract of the contra
1	Push start symbol 's' to the stack:
	S(90, E, Z) = (9, SZ)
2	For S-+ aAA:
	$S(Q_1, E, S) = (Q_1, AAA)$
3	For A -r as/ bs/a
	$S(21, E, A) = \{(21, aS), (21, bS), (21, a)\}$
4)	Fox Input symbols:
	$\{(2, a, a) = (2, \xi)$
	S(21, b, b) = (21, E)
3	8(21, 2, 2) = (22, 2)
î a	α, α/ ε΄
	3/01,0
	$\rightarrow 20$ ϵ , z/sz ϵ , z/z ϵ , z/z
	7 (7)
	E, S/a AA
	E, S/a AA E, A/aS
	E, A/65.
	E, A/a

ę	Subject:- AT Experiment / Tutorial / Assignment No.:- 6 Page:- 5
0.5)	$L = \int a^n b^{2n} \left(n \geqslant 1 \right)^n$
	$Q = \begin{cases} 20, & 21, & 22, & 23 & 24 \end{cases}$ $\Sigma = \begin{cases} a & b \end{cases}$
	$\Gamma = \{ Z, A \}$ $20 = \{ 20 \}$
	$Z_0 = \{Z\}$ $f = \{2f\}$
①	For each 'a', push A: $S(90, \alpha, Z) = (91, AZ)$ $S(91, \alpha, A) = (91, AA)$
0	For odd 'b' - no change: 8(21, b, A) = 8(22, A) 8(23, b, A) = 8(22, A)
3	Fox even 'b', pop. A: 8(92, b, A) = 8(93 E)
9	$\delta(23, \epsilon, Z) = (2f, Z)$
	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$
	6, A/A

	Subject :- AT Experiment / Tutorial / Assignment No. :- 6 Page :- 6
0 6)	L= {anbman m, n > 13
	$Q = \{ 90, 91, 92, 93, 94 \}$ $\Sigma = \{ a, b \}$
	$\Gamma = \{ Z, A \}$ $20 = \{ 20 \}$
	$Z_{0} = \{Z\}$ $F = \{Z_{f}\}$
	For each 'a' (before b) push A: $\delta(90, a, Z) = (91, AZ)$
	8 (21, a' A) = (21, AA). For each 'b', no change:
(D)	8 (91, b, A) = (92, A) 8 (92, b, A) = (92, A)
3	For each 'a' (after b), pop A: S(92, a, A) = (93 E) S(93, a, A) = (93, E)
E	S(23, E, Z) = (21, Z)
	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
	a, A/AA b, A/A (22)

	Subject :- AT	Experiment / Tutorial / Assignment No. :- 6	Page :- 🧡
Q.7)	S → OBB		
	B -7 0S / 18/0		
		?	
	$Q = \{20, 21, 24\}$ $Z = \{0, 13\}$	3.	
	1 2 10, 13	13	
	90 = 90]		
	Zo = { Z}		
	F = {2+3		
	Posh start symbo	el 's' to the stack:	
	8 (90, 8, 2)	= (21, SZ)	
(2)	For 5-7 0BB:		
	8 (91, 8, 8) -	→ · (2 ₁ , 0BB)	·
3	For B-> 05/13/		C
	8 (21, E, B) =	= { (91, OS), (91, 1S),	(2, 0) 5
		1 1	
9	For cirput sym 8 (-91, 1, 1)	= (9, 5)	
		= (91, 2)	
· · · · · · · · · · · · · · · · · · ·			
(3)	$8(q_1, \Sigma, Z) =$	(9+, 2)	
		1,1/2	
5.000		0,0/2	
	$\xi, z/sz$ $\rightarrow (90) \xrightarrow{\xi} \zeta$	$(2 \varepsilon, z/z)$	
		S/OBB	
		3/05	