

## Tutorial Week 11

(7) Bio

- a)
1.  $S \rightarrow bAB [b]$  (1) == qn1 3
  2.  $S \rightarrow aS [q]$  (1) qn1 to 3
  3.  $A \rightarrow bc [b]$
  4.  $A \rightarrow CB [c]$  (1) to 3 3
  5.  $B \rightarrow a [a]$

b)	a	b	c	(d)	bio
S	Replace ({s}a) Return	Replace (BAb{ss}) Return	Reject ('d')	Reject()	3
A	Reject	Replace (cb) Return	Replace (B{A}c) Return	Reject	?
B	Replace (a) Return	Reject	Reject	Reject (b)	?
q	Pop Advance	Reject	Reject	Reject	?
b	Reject	Pop Advance	Reject	Reject	3 3
c	Reject	Reject	Pop Advance	Reject	3
{s}	Pop retain out {s}	Pop retain out {s}	Pop retain out {s}	Reject	bio
{A}	Pop retain out {A}	Pop retain out {A}	Pop retain out {A}	Reject	3
▽	Reject	Reject	Reject	Accept	?

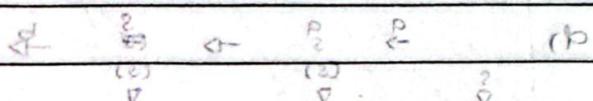
(1) to 3 3

c) void sc()

{ if (inp == 'b')

{ getInp();

System.out.println(s);



A();

B();

{

else if (inp == 'a')

{ getInp();

System.out.println(s)

{

else Reject();

{

No.: .....

Date: .....

```
void B()
{
    if (inp == 'a')
        getInp();
    else Reject();
}
```

```
void A()
{
    if (inp == 'b')
        getInp();
    C();
}

else if (inp == 'c')
    getInp();

System.out.println(A);
B();
}

else Reject();
}
```

d)		$\xrightarrow{a}$	$\overset{a}{S}$	$\rightarrow$	$S$	$\xrightarrow{b}$	$\overset{b}{\underset{B}{S}}$	$\xrightarrow{\text{out}(s)}$	$\overset{b}{\underset{B}{S}}$	$\rightarrow$	$\overset{a}{\underset{B}{S}}$	$\xrightarrow{c}$
		$S$	$(S)$		$(S)$		$(S)$		$(S)$		$(S)$	

$\overset{(A)}{B}$	$\rightarrow$	$\overset{(A)}{B}$	$\xrightarrow{a}$	$B$	$\rightarrow$	$\overset{a}{B}$	$\rightarrow$	$B$	$\xrightarrow{a}$	$\overset{a}{(S)}$	$\rightarrow$
$(S)$		$(S)$	$\text{out}(A)$	$(S)$		$(S)$		$(S)$		$(S)$	

	$\xrightarrow{\text{enter}}$		$\rightarrow$	$\text{accept}$
$(S)$	$\text{Out}(S)$			