

Date: \_\_\_\_\_

$V1: a^n c^m d^m b^{2n} \quad n \geq 0, m \geq 0 \quad \text{input}(acdbbb)$

$S_0 \rightarrow SR \mid TR \mid XR$

$A \rightarrow VF \mid ZF$

$S_0 \rightarrow SR \mid TR \mid XR$

$A \rightarrow VF \mid ZF \quad X \rightarrow a, Y \rightarrow b, Z \rightarrow c, F \rightarrow d$

$R \rightarrow YY, S \rightarrow XS_0, T \rightarrow XA, U \rightarrow XR, V \rightarrow ZA$

$j=5$	$S_0$	$XZFY$			
$j=4$	$\emptyset$	$XZFY$	$ZFY$		in first value same
$j=3$	$T$	$XZF$	$ZFY$	$FYY$	
$j=2$	$\emptyset$	$XZ$	$ZF$	$FY$	$YY$
$j=1$	$X$	$Z$	$F$	$Y$	$Y$
	$a$	$c$	$d$	$b$	$b$

for  $j=1$

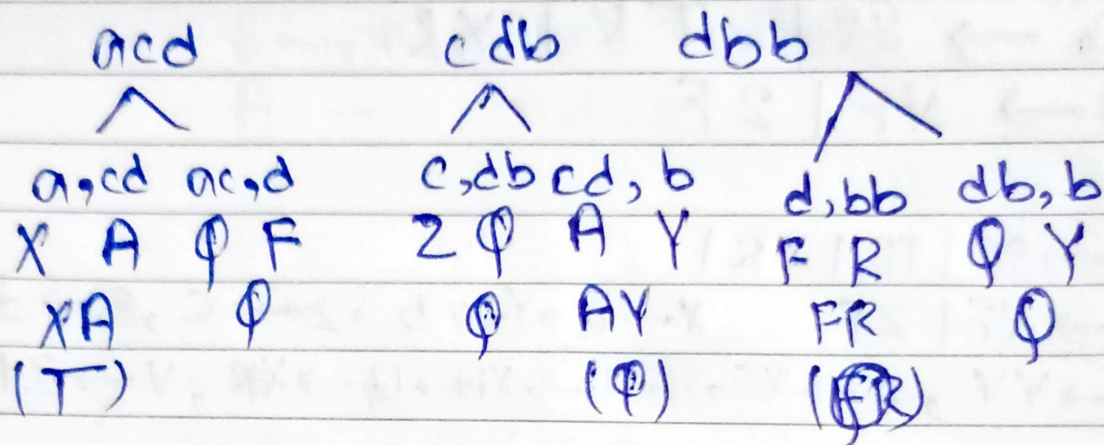
$a(X) \quad c(Z) \quad d(F) \quad b(Y)$

for  $j=2$

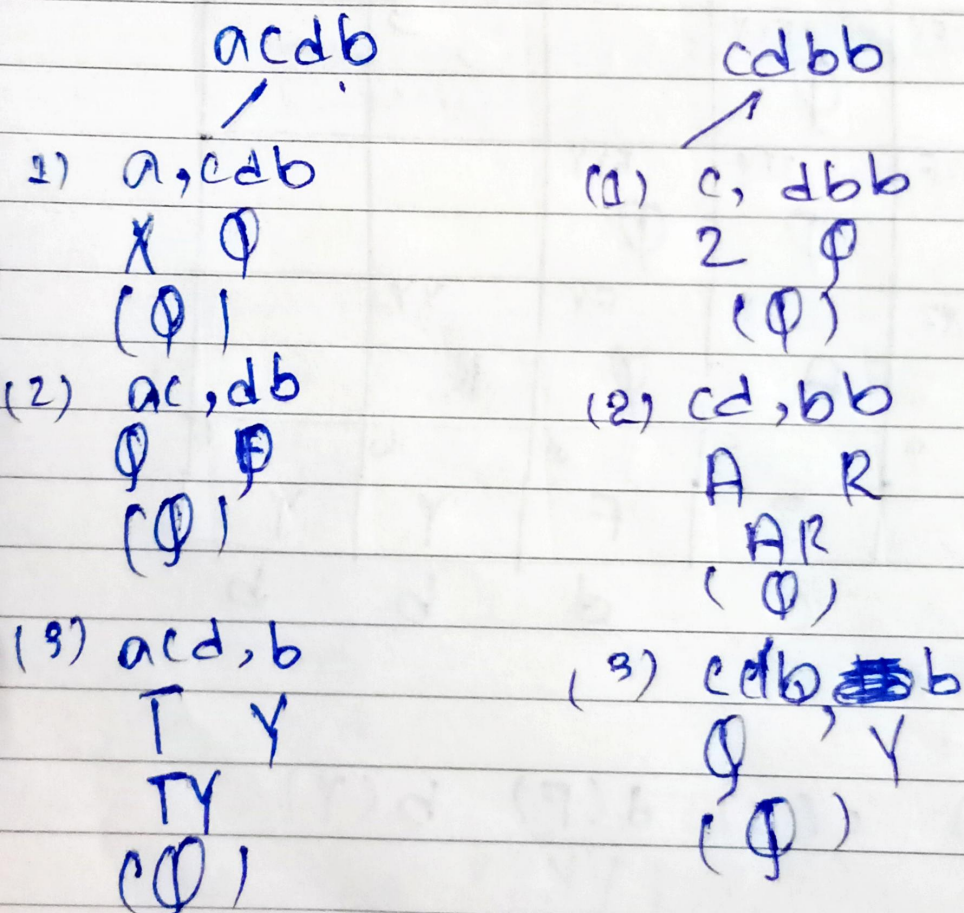
$XZ$	$ZF$	$FY$	$YY$
$(\emptyset)$	$(A)$	$\emptyset$	$R$
$ac$	$cd$	$db$	$bb$

for  $j=3$





for  $j=4$  :



for  $j=5$  :

acdbb

1) a, cdbb

X  $\emptyset$

( $\emptyset$ )

cdbb

c, dbb

(2) acdb, b

$\emptyset$  Y

( $\emptyset$ )

(3)

acd, bb

T R

TR

(So)

(4) ac, dbb

$\emptyset$   $\emptyset$

( $\emptyset$ )

(5)



$$accdb) \quad a^n c^m d^m b^n \quad n \geq 0, m \geq 0$$

$$S_0 \rightarrow GY \mid HY \mid XY$$

$$A \rightarrow JF \mid IF$$

$$X \rightarrow a, Y \rightarrow b$$

$$G \rightarrow XS, H \rightarrow XA$$

$$Z \rightarrow c, F \rightarrow d$$

$$I \rightarrow ZZ, J \rightarrow IA$$

j=5	accdb S <sub>0</sub>				
j=4	acd H	cdb ∅			
j=3	acc ∅	cd A	db ∅		
j=2	ac ∅	c I	d ∅	db ∅	
j=1	a X	c Z	c Z	d F	b Y
	a	c	c	d	b

for j=1:

a(X)    c(Z)    d(F)    b(Y)

for j=2:

ac	cc	cd	db
XZ	ZZ	ZF	FY
(∅)	(I)	(∅)	(∅)



for  $j=3$

acc, ccd, cdb

<p>acc, c  <math>\emptyset, 2</math>  <math>(\emptyset)</math></p> <p>2) ac, cc  XI  <math>(\emptyset)</math></p>	<p>cc, d  IF  (A)</p> <p>(2) c, cd  2, <math>\emptyset</math>  <math>(\emptyset)</math></p>	<p>cd, b  <math>\emptyset, Y</math>  <math>(\emptyset)</math></p> <p>(2) c, db  2, <math>\emptyset</math>  <math>(\emptyset)</math></p>
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for  $j=4$

for  $j=5$

<p>accd</p> <p>(1) a, ccd  XA  (H)</p> <p>(2) acc, d  <math>\emptyset</math> F  <math>(\emptyset)</math></p> <p>(3) ac, cd  <math>\emptyset</math> <math>\emptyset</math>  <math>(\emptyset)</math></p>	<p>ecdb</p> <p>(1) e, cdb  2, <math>\emptyset</math>  <math>(\emptyset)</math></p> <p>(2) ced, b  AY  <math>(\emptyset)</math></p> <p>(3) ce, db  I, <math>\emptyset</math>  <math>(\emptyset)</math></p>	<p>accdb</p> <p>(1) a, accdb  X, <math>\emptyset</math> <math>(\emptyset)</math></p> <p>(2) accd, b  HY (So)</p> <p>(3) ac, cdb  <math>\emptyset</math> <math>\emptyset</math> <math>(\emptyset)</math></p> <p>(4) acc, db  <math>\emptyset</math> <math>\emptyset</math> <math>(\emptyset)</math></p>
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