HAME: Moruma Fernandus	CLASS SEIT ROLL NO: 8669
an analysis of the second of t	TUTORIAL NO: 6
Q.1] Convert the following s - 6 A	grammar to CNF
	1 a B
	AA as a
	BB BS B
ons: often simplification,	
9 → 64 aB	
A - bAA as	
B → aBB bs	
B - aBB bs	with terminal and non-terminal
B → aBB bs	with terminal and non-terminal
B → aBB bs offer numoving RHS and more than two s. → s	b with terminal and non-terminal o non-terminals
B → aBB bs after enemoving RHS and more than two s. → s P → a g	b with terminal and non-terminal o non-terminals
B → aBB bs after summoving RHS and more than two s. → s P → a q s → ga PB	b with terminal and non-terminal o non-terminals: → b
B → aBB bs after enemoving RHS and more than two s. → s P → a g	with terminal and non-terminal or non-terminals. → b
B → aBB bs after summoving RHS and more than two s. → s P → a g S → gA PB A → GAA PS	with terminal and non-terminal or non-terminals. → b
B → aBB bs after summoving RHS and more than two s. → s P → a q S → gA PB A → QAA PS	b with terminal and non-terminal o non-terminals: → b a b
B → aBB bs after summoving RHS and more than two s. → s P → a g S → gA PB A → QAA PS B → PBB Qs	b with terminal and non-terminal o mon-terminals: → b a s b
B \rightarrow aBB bs after numering RHS and more than two s. \rightarrow s P \rightarrow a g S \rightarrow ga PB A \rightarrow gaa PS B \rightarrow PBB Qs	b with terminal and non-terminal b mon-terminal a b a s b
B \rightar aBB bs after numering RHS and more than two s. \rightars P \rightars a q S \rightars gA PB A \rightars PBB Qs 50 \rightars a q	b with terminal and non-terminal b mon-terminals → b → b → BB

9.3] Convert the following grammar to CNF.

$$S \rightarrow XA \mid BB$$
 $B \rightarrow b \mid SB$
 $X \rightarrow b$
 $A \rightarrow a$

One: Let $P \rightarrow a$ $G \rightarrow b$
 $G \rightarrow PAGB$
 $A \rightarrow PA \mid a$
 $B \rightarrow GB \mid b$

1st $R \rightarrow PA$, $T \rightarrow GB$
 $S \rightarrow RT$
 $A \rightarrow R \mid a$
 $B \rightarrow T \mid b$
 $R \rightarrow PA$
 $A \rightarrow A \mid a$
 $A \rightarrow A \mid a$

T- AB

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Q4] Convert given CFG to CNF.
             S - ASB / E
             B - 3bs A bb
             A - aAsla
ons Elimination & production,
      S - ASB AB
      B - sbs | A | bb | sb | bs | b
      A - a4s a a A.
    Eliminating
      S - ASB AB
      A - aAS a aA
      B - 565 | 66 | 56 | 65 | 6 | aAS | a | aA.
    simplifying,
       So -> 5
       S - ASB AB
       A - aAs a aA
       B - sbs | bb | Sb | b5 | b | a A5 | a | aA
    Removing unit production:
       So - ASB AB
       S - ASB AB
       A - aAS a aA
       B -> 565 | 66 | 65 | 6 | aAS | a | aA
    Let P-a g-b R-aA T-bS V-SB
       SO -AU AB S- AU AB
       A -> RS a PA
       B -> ST ag | Sg | gs | RS | b a | AA
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