Assignment No.6 (FIRST and FOLLOW sets) Names Jesse Shaihor, Jay Vang Cristian Salinas row.....

Use the provided tables to answer the question .

Given the following CFG

(i) **A? A + B (ii) A ? A-B (iii)A ? A * B (iv) A ? B (v) B ? (A) l a;**

(5 points) Remove left-recursions. Find members of **FIRST** and **FOLLOW**

Remove left recursions	States	FIRST	FOLLOW
A? BA' A'? +BA' A'? -BA' A'? *BA' A'? λ B? (A) l a	A	{ (a }	{ $ + - *) }
	A'	{ + - λ }	{ $ + - *) }
	B	{ (a }	{ $ + - *) }

2. (5 points) Given CFG below. Complete the table where Terminals={ i d (,) if else $; }, Non-terminals={ S L C E }

S? if (E) S else S;
S? i (L)

L? E C
C? λ
C? , E C
E? i
E? d

States	FIRST	FOLLOW
S	{ if i }	{ $ else ; }
L	{ i d }	{) }
C	{ λ , }	{) }
E	{ i d }	{) λ , }

3. (5 points) Complete the table for the given CFG where Terminals={e f h g f i }, Non-terminals={S A B C D }

S? AB
S? C f
A? e f
A? λ
B? hg
C? DD
C? f i
D? g

States	FIRST	FOLLOW
S	{ e λ g f }	{ $ }
A	{ e λ }	{ h }
B	{ h }	{ $ }
C	{ g f }	{ f }
D	{ g }	{ g }

4. (5 points) Complete the table for this CFG. Terminals={ b d a} , Non-terminals={ S T U V }

S? **TU**
T? aVa
T? λ

States	FIRST	FOLLOW
S	{ a λ }	{ $ }
T	{ a λ }	{ b }
U	{ b }	{ $ b }
V	{ b d }	{ a λ }