CSIS Department;

1st Sem 2020-21; PPL (CSF301) Test-3

Date: 11-11-2020 Wt: 15% Total marks: 30marks (30 mins)

Mode: Using Google Forms through Google Classroom

Q1. We have Grammar G with following rules-

1. **S→CC**
2. **C→aC**
3. **C→d**

STATE	ACTION			GOTO	
	a	*d*	$	*S*	*C*
0	s3	s4		1	2
1			acc		
2	s6	s7			5
3	s3	s4			8
4	r3	r3			
5			r1		
6	s6	s7			9
7			r3		
8	r2	r2			
9			r2		

Using the above Grammar (with rule numbers) and the LR parsing table given above, and we assume that the process of parsing the valid string ***aadd*** is to be depicted in the table with relevant columns as discussed in the class. We have row one (R1 the very first row), entries as:

[R1: **0 ; aadd$; S3**]

Now give entries for R4, R6 and R9 of the parsing table.

No need to give the complete table. Only give row entries for stack, input and action in the format

[R1: **0; aadd$; S3**]

Do not forget to include row number.

[4+3+3=10]

Question 2:

The Grammar G= { S→aCbS; S→aCbSc; S→d; C→ f} is ambiguous. True / False

[3 marks]

Question 3: Give pseudo code for subprograms associated with each Non-terminals of Recursive Descent Parser for the Grammar.

G= { S→aBb; B→ aA | b; A→ bB | b } [6 Marks]

Note: Since answer is typed into the response box of the form, following indentation is not mandatory. You can write multiple statements of a subprogram in one line.

Question-4. Which of the following implement INOUT mode parameter transmission method?

A. Pass-by-value
B. Pass-by-result
C. Pass-by-value-result
D. Pass-by-reference
E. Pass-by-name

Tick all correct options. [2 marks]

Question-5. Which of the following are user-defined ordinal types? [2 marks]

A. Array types
B. Record types
C. Enumeration type
D. Subrange type
E. Union type

Tick all correct options.

Question-6. Which of the following Languages include built-in pattern-matching operations using regular expressions? [2 marks]

A. Ada
B. Perl
C. Visual basic
D. Ruby

Tick all correct options.

Question -7.

Construct a CFG for set of strings over {***x,y***} such that consecutive ***x*** can occur but no consecutive ***y*** can occur. [5 marks]