



Daffodil International University
Faculty of Science & Information Technology
Department of Computer Engineering
Course Code: CSE 331 ; Course Title: Compiler Design

Time: 1 hour

22/11/2025

Marks: 15

Sl.	Question	Marks
1.	$S \rightarrow \text{Expr}$ $\text{Expr} \rightarrow \text{Expr} + \text{Expr}$ $ \text{Expr} - \text{Expr}$ $ \text{Term}$ $\text{Term} \rightarrow \text{Term} * \text{Term}$ $ \text{Factor}$ $\text{Factor} \rightarrow (\text{Expr})$ $ \text{id}$	
	a) "id - id - id", Show LMD and RMD of the string through the production rules	03
	b) Is this string ambiguous for this grammar? show how and identify the production rule creating this ambiguity.	04
2.	$S \rightarrow S 0 A 1 B 2$ $A \rightarrow A 3 S 4 B 5$ $B \rightarrow B 6 S 7 A 0$	
	a) Does this grammar have left recursion cycles? If so identify the types of left recursion it contains, and produce the new rules, solving that issue.	04
3.	$S \rightarrow \underline{abcde}X \underline{abcde}Y \underline{abcf}Z \underline{abg} \underline{ah} \underline{k}$	
	a) Complete all the left factoring of the above production rule	04