Amity School of Engineering & Technology
B.Tech. - CSE /CSE (EVE)/ B.Tech. – CSE-3C (5th semester)
Compiler Construction (CSE 304) / Minor Exam
Time: 1 hour
Max. Marks: 20

Section A
(Attempt any Three)

Q1. a) What are the possible error-recovery actions in Predictive parser. (2)
b) Give the input and output for the analysis phases of a compiler using given expression: I=(P*R*T) / 100; (2)

Q2. Calculate first and follow for the following grammar:

$S \rightarrow [\,S\,X\,]\,|\,a$
$X \rightarrow \varepsilon\,|\,+\,S\,Y\,|\,Y\,b$
$Y \rightarrow \varepsilon\,|\,-\,S\,X\,c$

Give the predictive parsing table, Also check whether that the given grammar is LL(1) or not. (4)

Q3. a) Give a R.E. that can recognize a declaration statement of C language. (2)
b) Eliminate left recursion from the following grammar:

$S \rightarrow Aa \mid b$

$A \rightarrow Ac \mid Ad \mid AAB \mid bA \mid Ba \mid aA \mid zAA \mid \varepsilon$

$B \rightarrow cB \mid b \mid aB$

(2)

Q4. Give the operator precedence table using the following precedence functions

	Id	+	*	$
f	4	2	4	0
g	5	1	3	0

(4)

Section B
(Compulsory)

Q5. Construct SLR parsing table for the following grammar:

$E \rightarrow T + E \mid T$
$T \rightarrow int * T \mid int \mid (E)$

Also give the DFA using LR(0) items. (8)

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