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Roll No.....

VI-SEMESTER  
MID SEMESTER EXAMINATION

B.Tech.(CO)  
March-2019

CO-302 Compiler Design

Time: 1:30 Hours

Max. Marks: 30

Note: Attempt all questions

**Q.No. 1**

A. Compute FIRST and FOLLOW sets and Construct a predictive parsing table for the following grammar, where S is the start symbol. [7]

$S \rightarrow iEtS \mid a$

$S \rightarrow iEtSeS$

$E \rightarrow b$

B. Explain different phases of compiler with suitable example. [3]

**Q.No. 2**

A. Construct SLR(1) parsing table for the following grammar, where S is the start symbol [5]

$S \rightarrow BB$

$B \rightarrow bB \mid a$

B. What is the role of Push down automata (PDA) in syntax analysis?

Eliminate Left recursion from following grammar [5]

$S \rightarrow aBDh$

$B \rightarrow Bb \mid c$

$D \rightarrow EF$

$E \rightarrow g \mid \epsilon$

$F \rightarrow f \mid \epsilon$

**Q.No. 3**

A. Consider following grammar and test whether the grammar is LL(1) or not ? [5]

$S \rightarrow 1AB \mid \epsilon$

$A \rightarrow 1AC \mid 0C$

$B \rightarrow 0S$

$C \rightarrow 1$

B. Design a context free grammar (CFG) for the language  $L = \{x^c y^c z^d u^d \mid c \geq 1, d \geq 1\}$  [5]