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**VI-SEMESTER**
**MID SEMESTER EXAMINATION**

**B.Tech.(CO)**
**March– 2020**

**CO-302 Compiler Design**

Time: 1:30 Hours

Max. Marks: 30

Note: Attempt all questions

## Q.No. 1

A. Compute FIRST & FOLLOW and Construct a predictive parsing table for the following grammar, where S is the start symbol.   [6]

$$S \rightarrow aBDh$$
$$B \rightarrow Bb \mid c$$
$$D \rightarrow EF$$
$$E \rightarrow g \mid \epsilon$$
$$F \rightarrow f \mid \epsilon$$

B. What is cross compiler? Explain different phases of compiler for the source code   Position =initial+ rate *45   [4]

## Q.No. 2

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

$$S \rightarrow BbBa \qquad A \rightarrow \epsilon$$
$$S \rightarrow AaAb \qquad B \rightarrow \epsilon$$

B. What is the role of Context free grammar (CFG) in Compiler Design? Construct a CFG for language L={ $0^a 1^b$ | a≠b} and eliminate Left recursion from following grammar   [5]

$$S \rightarrow A$$
$$A \rightarrow Ad \mid Ae \mid aB \mid aC$$
$$B \rightarrow bBC \mid f$$
$$C \rightarrow g$$

## Q.No. 3

A. What are the problems associated with Top down parsing? Is the following grammar LL(1)?   [5]

B. Explain recursive descent parsing and shift reduce parsing with suitable examples.   [5]