

BTCS601

VII Semester Examination, December 2019

B.Tech./B.Tech.+M.Tech./B.Tech.+MBA [CSE / CCE]

Compiler Design

Choice Based Credit System (CBCS)

Time: 3 Hrs.

Maximum Marks : 60

Minimum Pass Marks: 24

- Note:* (1) All questions carry equal marks, out of which part 'A' and 'B' carry 3 marks each and part 'C' carries 6 marks.
(2) From each question, part 'A' and 'B' are compulsory and part 'C' has internal choice.
(3) Draw neat diagrams, wherever necessary.
(4) Assume suitable data, wherever necessary.

- Q.1(A)** Describe the Compiler with its phases with neat and clean diagram. **03**
(B) Explain the details of compiler construction tools. **03**
(C) Write short notes on following: **06**
a) Boot-strapping b) Cross-Compiler c) Look-ahead Operator

OR

Give short description of tools "LEX" and "YACC".

- Q.2(A)** Explain the recursive-descent parsing and predictive parsing. **03**
(B) Differentiate top-down from bottom-up parsing techniques. **03**
(C) Explain the LL (1) Parsing (Non-Recursive Descent Parsing) technique by using the following grammar for the string id*id+id; **06**

$$E \rightarrow E+T \mid T$$

$$T \rightarrow T * F \mid F$$

$$F \rightarrow (E) \mid \text{id}$$

OR

Explain the following points with suitable examples:

- a) Left recursion removal b) Left factoring c) FIRST and FOLLOW symbols;
Algorithm for LL(1) Parsing Table.

Contd....

