

B.SC. (I. T.) SEM. - IV (2011 COURSE) : WINTER - 2017
SUBJECT : THEORY OF COMPILERS

Day : **Saturday**
Date : **23/12/2017**

W-2017-0875

Time : **02.30 pm to 04.30 pm**
Max. Marks : 40

N.B.:

- 1) Attempt **ANY FIVE** questions.
 - 2) All questions carry **EQUAL** marks.
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- Q.1** What is Parsing? Explain Shift Reduce Parsing in detail.
- Q.2** What is Type Checking and why is it necessary? Explain static and dynamic type checking.
- Q.3** Describe the following with appropriate examples:
- a) Imperative Symbol Table.
 - b) Persistent Symbol Table.
- Q.4** Explain the differences between Compiler and Interpreter. Describe any two examples for each.
- Q.5** Describe NFA and DFA. Explain the steps for converting a regular expression to NFA.
- Q.6** Write short notes on:
- a) Code Optimization.
 - b) Object files and significance.
- Q.7** Construct an LL (1) parsing table for the following grammar:
- $$E \rightarrow E + T / T$$
- $$T \rightarrow T * F / F$$
- $$F \rightarrow (E) / id$$

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