

No. of Printed Pages : 03

Roll No.

F-2

B. Tech. EXAMINATION, May 2016

(Sixth Semester)

(B. Scheme) (Main/Re-appear)

(CSE, IT)

CSE-304-B

COMPILER DESIGN

Time : 3 Hours]

[Maximum Marks : 75

Before answering the question-paper candidates should ensure that they have been supplied to correct and complete question-paper. No complaint, in this regard, will be entertained after the examination.

- (b) Explain the need of grouping of phase of compiler. 5
2. (a) Write a context free grammar for palindrome. 5
- (b) How lexical analyzer is implemented ? Construct a lexical analyzer for tokens being, for, while, wait, identifier. 10
3. (a) What is ambiguous grammar ? Explain with example. 5
- (b) What is operator precedence grammar ? Draw the precedence relation of the following grammar : 10
- $S \rightarrow iCtSS'/a$
- $S' \rightarrow eS/\epsilon$
- $C \rightarrow b$
4. Define various LR Parser. Construct a LR parser for grammar : 15
- $E \rightarrow E + T/T$
- $T \rightarrow T * F/F$
- $F \rightarrow (E)/id$
5. Define the term error. Explain various types of errors. Also explain, how to recover error in Operator precedence parsing ? 15
6. (a) How to construct a syntax tree ? Define with example. 10
- (b) What is a three address code, quadruple, triples ? How is it implemented ? 5
7. (a) Write a short note on standard storage allocation strategy. 5
- (b) What is dependency graph ? Write the syntax directed translation for declaration grammar. Also construct a dependency graph for the sentence id1, id2, id3. 10
8. What are the issues in the design of the code generator ? Explain the code generation algorithms. 15