B. Tech. EXAMINATION, May 2016
(Sixth Semester)
(B. Scheme) (Main/Re-appear)
(CSE, IT)
CSE-304-E
COMMERCE 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.  

2. (a) Write a context free grammar for palindrome.  
(b) How lexical analyzer is implemented? Construct a lexical analyzer for tokens being, for, while, wait, identifier.  

3. (a) What is ambiguous grammar? Explain with example.  
(b) What is operator precedence grammar? Draw the precedence relation of the following grammar:  

\[ S \rightarrow iCtSSl/a \]
\[ S' \rightarrow eS/e \]
\[ C \rightarrow b \]

4. Define val to T. L parser. Construct a S-to-t parser for grammar:  
\[ E \rightarrow E + T/T \]
\[ T \rightarrow T*F/F \]
\[ F \rightarrow (E)/id \]

5. Define the term error. Explain various types of errors. Also explain, how to recover error in Operator precedence parsing?  

6. (a) How to construct a syntax tree? Define with example.  
(b) What is a three address code, quadruple, triples? How is it implemented?  

7. (a) Write a short note on standard storage allocation strategy.  
(b) What is dependency graph? Write the syntax directed translation for declaration grammar. Also construct a dependency graph for the sentence id1, id2, id3.  

8. What are the issues in the design of the code generator? Explain the code generation algorithms.