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B. Tech. (CSE) 6th Semester (G Scheme)

Examination, July-2022

COMPLIER DESIGN

Paper-PCC-CSE-302-G

Time allowed : 3 hours]

[Maximum marks : 75

Note : Question No. 1 is compulsory. Attempt five questions in total by selecting one from each unit.

1. Write short notes on : 6×2.5=15
- (a) Applications of compiler
 - (b) Notations for regular expressions
 - (c) Compiler construction tools
 - (d) Benefits of Intermediate code generation
 - (e) Ambiguous grammar
 - (f) Code generation

Unit-I

2. Describe the phases of compiler. 15
3. (a) What is Lexical analysis ? 9
- (b) What is role of Input buffer & how it helps in lexical analysis ? 6

Unit-II

4. Calculate first and follow for the following grammar : 15

$$E \rightarrow E + E \mid E * E \mid (E) \mid id$$

5. Explain top-down parsing with a suitable example. 15

Unit-III

6. Explain the making of LR (o) parsing table for the following grammar : 15

$$E \rightarrow E * B \mid E + B \mid B, \quad B \rightarrow O \mid I$$

7. How CLR parser differs from LALR parser ? Please explain. 15

Unit-IV

8. What are the various strategies for code optimization ? 15
9. Explain code generation in detail. 15