

24488

B.Tech. 7th Semester (F) Scheme (CSE)

Examination, December-2018

COMPILER DESIGN

Paper – CSE- 405-F

*Time allowed : 3 hours]*

*[Maximum marks : 100*

*Note: Attempt five questions in total selecting one question from each unit. Question number 1 is compulsory. All questions carry equal marks.*

**Compulsory Question**

1. (i) What is Language Translator?
- (ii) Differentiate Pass one and Pass two Compiler.
- (iii) Define lexeme, token pattern.
- (iv) What do you mean by ambiguous grammar? Explain by taking suitable example.
- (v) Differentiate parse tree and syntax tree.
- (vi) Define operator grammar.
- (vii) Define Syntax errors. How these errors are removed by Compiler'?
- (viii) Define handle and handle pruning.
- (ix) What do you mean by DAG?

**Unit-I**

2. (a) What do you mean by Compiler? Why we need compiler. What are the computer construction tools?

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- (b) Briefly explain the structure of a compiler.
- 3. (a) Design a DFA over an alphabet  $\Sigma = \{a,b\}$  that accepts all the strings ending with **ab**.
- (b) What is LEX? Discuss its role in compiler design.

#### Unit-II

- 4. (a) Explain the Chomsky hierarchy.
- (b) Construct a CFG for the language.
- 5. Explain different Parsing Technique in detail.

#### Unit-III

- 6. Explain code optimization and its utility with example.
- 7. What do you mean by three address code quadruples and triples? Explain with example.

#### Unit-IV

- 8. (a) What are typical entries in symbol table, what are various data structures used to implement the table?
- (b) How symbol table space can be reused? Give some example.
- 9. Write short notes on:
  - (a) Peephole optimization
  - (b) Machine Dependent Code