

Unit-IV

8. (a) What do you mean by Code generation ?
Explain the various issues in code generation in detail.
- (b) What do you mean by code optimization ?
Explain the principal sources of optimization in detail.
9. Explain the following in detail :
- (a) Design of a simple code Generator
- (b) Global Data Flow Analysis

67005-N

(4)

RR-586

Roll No :

Total No. of Questions : 9] [Total No. of Pages : 4

67005-N

MCA 1st Semester (Regular)
Examination, March-2022
(MCA 2 Year Programme)
(ref. 2020-21)
Paper-20MCA21C2
COMPILER DESIGN

Time : Three Hours] [Maximum Marks : 80

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

Note :- Attempt five questions in all, selecting one question from each Unit. Q. No. 1 is compulsory. All questions carry equal marks.

1. (a) Explain Go Loader.
- (b) What is Loop Optimization ?
- (c) Explain the role of Parser.

67005-N

(1)

RR-586 P.T.O

- (d) What is Finite Automata ?
- (e) Write a short note on Peephole optimization.
- (f) What do you mean by a cross-compiler ?
- (g) Explain error handling in LR parsing.
- (h) What is Subroutine linkage ?

Unit-1

- 2. (a) What are linkers and loaders ? Explain static and dynamic scope for linking. Also, differentiate between compiler and assembler.
- (b) What do you mean by System Software Tools ? Explain the variety of software tools in detail.
- 3. Explain the following in detail :
 - (a) General Loader Schemes
 - (b) Direct Linkage Loader

67005-N

(2)

RR-586

- 4. (a) Define Compiler. How is it different from interpreter ? Explain various phases of a compiler.
- (b) Define bottom-up approach of parsing. What are its advantages ? Discuss various LR parsers.
- 5. (a) Explain the role of lexical analysis. Describe various lexical-errors. Also write a brief note on regular expressions.
- (b) Define top-down parsing. Also explain the problems associated with top-down parser.

Unit-III

- 6. (a) What is meant by syntax directed definition ? Explain the order of syntax directed definitions in detail.
- (b) Define symbol table. What are various data structures that are used for a symbol table ?
- 7. Explain the following in detail :
 - (a) Intermediate code generation
 - (b) Syntax Trees and Construction of syntax trees

67005-N

(3)

RR-586 P.T.O