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Total Pages : 3

Roll No.

MCA-15//M.SC (IT)-15

System Software

Master of Computer Applications/

Master of Science in Information Technology (MCA/MSc.IT)

Fourth Semester Examination, 2022 (June)

Time : 2 Hours]

Max. Marks : 80

Note : This paper is of Eighty (80) marks divided into two (02) Sections A and B. Attempt the questions contained in these sections according to the detailed instructions given therein.

SECTION–A

(Long Answer Type Questions)

Note : Section 'A' contains Five (05) long answer type questions of Twenty (20) marks each. Learners are required to answer any Two (02) questions only.

(2×20=40)

1. Why compilers use intermediate representation? What does intermediate code look, like?

2. Why does linking loader require 2 passes to complete loading? Explain the operations of linking loader? Explain the various types in MS-Dos linker?
3. Differentiate between Deterministic Finite Automata (DFA) and Non-Deterministic Finite Automata (NFA) with suitable examples.
4. Explain the following machine independent macro features :
 - (a) Concatenation of macro parameters.
 - (b) Generation of unique labels.
 - (c) Key word macro parameters.
5. What is Lexical Analysis? What are its roles? Also explain significance of programs.

SECTION-B

(Short Answer Type Questions)

Note : Section 'B' contains Eight (08) short answer type questions of Ten (10) marks each. Learners are required to answer any Four (04) questions only. (4×10=40)

1. What is the difference between 'Assembly Language' and 'Assembly Process'? Explain.
2. What is syntax analysis? What is the role of parser in syntax analysis? Explain.

3. With the help of an example explain the difference between Type-0 and Type- 2 grammar.
 4. What are the 'Phase of Compiler'? Explain each.
 5. Answer the following :
 - (a) Distinguish between a linker and a loader with the help of examples.
 - (b) Define one pass assembler.
 6. What is 'Content Free Grammars' with reference to Syntax analysis? Explain.
 7. Which are the four fundamental function performed in edition? Explain each in brief.
 8. Explain the classification of System Software.
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