

**817**

Total pages : 03

Roll No. ....

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

**System Software**

Master of Computer Application/

Master of Science in information Technology

(MCA/MSc.IT-11/12/16/17)

Examination 2021 (Winter)

**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 x 20=40)

Q.1 What is compiler? Explain the structures of compiler?

Q.2 What is loader? Explain each loader in brief?

P.T.O.

**817**

- Q.3 Explain the concept of non-deterministic finite automata?
- Q.4 What is assembly language? Explain the three basic facilities of assembly languages. Explain one pass macro processor algorithm.
- Q.5 What do you understand by Code Generation? Explain the intermediate language, declaration and assignment statements?

## 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 x 10=40)

- Q.1 What do you understand 'Data Structure'? Explain in detail.
- Q.2 What is 'Chomsky Hierarchy'? Explain with suitable diagram and algorithms.

- Q.3 What is 'Content Free Grammars' with reference to Syntax analysis? Explain.
- Q.4 Differentiate between top down and bottom up parsing.
- Q.5 What is assembler? What are the difference between compiler and assembler? Explain.
- Q.6 What is the purpose to LEX? Explain YACC and its features.
- Q.7 Explain the System Software Define its types..
- Q.8 What is 'Runtime Storage Managment'? Also explain 'assignment statements'.

\*\*\*\*\*