

Total No. of Pages : 02

Roll No.

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Total No. of Questions : 09

MCA (E-I) (2015 & Onwards) (Sem.-3)  
**SYSTEM PROGRAMMING**  
Subject Code : MCA-305A  
M.Code : 74077

Max. Marks : 60

Time : 3 Hrs.

**INSTRUCTIONS TO CANDIDATES :**

1. SECTIONS-A, B, C & D contains TWO questions each carrying TEN marks each and students has to attempt any ONE question from each SECTION.
2. SECTION-E is COMPULSORY consisting of TEN questions carrying TWENTY marks in all.

#### SECTION-A

1. Explain various data structure required for the design of a Macro-processor with an example.
2. What do you mean by assembler? Explain Single pass assembler with algorithm.

#### SECTION-B

3. Describe the data structure and algorithm for linking loader.
4. With the help of suitable diagram, explain in detail the structure of a text editor.

#### SECTION-C

5. Explain various permanent and temporary tables used in the designing of Compiler.
6. What is YACC? Explain the different sections used in writing the YACC Specification.

#### SECTION-D

7. Define distributed system. Explain key concepts and techniques used in distributed system.
8. What is operating system? Explain functions and types of operating system in detail.

## SECTION-E

9.
  - a) What do you mean by dynamic loading?
  - b) What is a macro call and macro expansion?
  - c) Explain use of linkage editor.
  - d) Define multitasking.
  - e) What do you mean by virtual devices?
  - f) What do you mean by device driver?
  - g) Explain briefly Network Operating system.
  - h) What is a Deterministic finite automation?
  - i) How system software is different from application software?
  - j) What do you mean by dynamic linking?