Roll No. ☐☐☐☐☐☐☐☐☐☐☐☐   **Total No. of Pages : 2**

Total No. of Questions : 09

MCA (Sem.–4)
SYSTEM SOFTWARE
Subject Code : MCA-403
Paper ID : [B0117]

Time : 3 Hrs.   **Max. Marks : 60**

INSTRUCTION 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 carrying TWENTY marks in all.**
  3. Use of non-programmable **scientific calculator** is allowed.

SECTION-A

l. Describe the general design procedure of a two pass assembler.   10

2. What are Software Processors? Explain elements of Assembly Language Programming.

SECTION-B

3. Differentiate betweem absolute, relocating & direct linking loader.   10

4. What are Macro Instructions and explain features of a Macro Facility. 10

SECTION-C

5. What is Compiler ? Explain phases of the Compiler.   10

5

   b) What is self Relocating Program? Explain it in detail?   5

SECTION-D

7. What is Processor management? Explain Scheduler and race condition.
                                                                        10

8. Describe Paged Allocation and differentiate it with Demand Paged Allocation.
                                                                        10

SECTION-E

9. Write briefly :

   a) Explain Text Editor and its design.

   b) Explain Single Pass Assembler.

   c) What are the objectives of segmented environment?

   d) What is traffic controller in processor management?

   e) Explain Code Optimization in detail.

   f) Describe Compile and Go Loader.

   g) What is Pure and Impure Interpreter?

   h) Explain Nested Macro Calls.

   i) Elaborate structure & features of file system,

   j) Explain the design of a Macro Processor.