

Roll No.

Total No. of Questions : 09]

[Total No. of Pages : 02

MCA (Sem. - 4th)
SYSTEM SOFTWARE
SUBJECT CODE : MCA - 403
Paper ID : [B0117]

[Note : Please fill subject code and paper ID on OMR]

Time : 03 Hours

Maximum Marks : 60

Instruction to Candidates:

- 1) Attempt any One question from Section - A, B,C & D.
- 2) Section - E is **Compulsory**.
- 3) Use of non - programmable **Scientific Calculator** is allowed.

Section - A

(1 × 10 = 10)

- Q1)** a) What features of assembly language required us to build a two-pass assembler?
b) Describe in detail text editor and its design.
- Q2)** Explain in detail the elements of assembly language programming.

Section - B

(1 × 10 = 10)

- Q3)** What is macro processor? Describe the input and output of the macro processor. How dependent is it upon the assembler source code format?
- Q4)** a) What is Compiler and go loader?
b) List two advantages and disadvantages of binding at load time over binding at assembly time.

Section - C

(1 × 10 = 10)

- Q5)** Draw a block diagram of the phases of a compiler and indicate the main function each phase.
- Q6)** What is code optimization? Describe in detail how code can be optimized by performing elimination of common sub-expressions.

Section - D

(1 × 10 = 10)

Q7) Describe in detail demand paged allocation and segmented paged allocation.

- Q8)** a) Distinguish between races and stalement.
b) Describe in detail the function of I/O traffic controller.

Section - E

Q9) Give short answers of the following:

(10 × 2 = 20)

- a) What is symbol table? Why is it used?
- b) What is absolute loader?
- c) Differentiate between lexical analysis and syntax analysis.
- d) What are local and global optimizations?
- e) What are the features of macro facility?
- f) Differentiate between pure and impure interpreters.
- g) What are nested macro calls?
- h) What is token?
- i) What do you mean by terminal table and literal table?
- j) What are the features of file systems?

