Roll No. .....

Total No. of Questions : 09] [Total No. of Pages : 02

Paper ID [B0117]

(Please fill this Paper ID in OMR Sheet)

M.C.A. (Sem. - 4th)

SYSTEM SOFTWARE (MCA - 403)

Time : 03 Hours **Maximum Marks : 60**

Instruction to Candidates:

1) Attempt any one question from each Sections **A,B,C & D.**
2) Section - E is **Compulsory.**

Section - A *(1 × 10 = 10)*

Q1) Discuss various types of text editors and also discuss the editor performance issues.

Q2) (a) Explain differences between single pass and two pass assembler.
(b) Develop a complete program specification for the passes of a two pass assembler.

Section - B *(1 × 10 = 10)*

Q3) (a) Explain the task performed by macro processor.
(b) Explain in detail functions of loader.

Q4) (a) Describe the input and output of the microprocessor. How dependent is it upon the assembler source code format?
(b) Discuss the in detail interpreter.

Section - C *(1 × 10 = 10)*

Q5) Explain phases of a compiler in detail.

Q6) What is the requirement of optimization? Discuss machine-independent optimization techniques.

Section - D

(1 × 10 = 10)

Q7) (a) What is process management? Explain all the types of scheduler.
(b) When do page faults occur? Describe the actions taken by the operating system when a page fault occurs.

Q8) Discuss in detail structure and features of file system.

Section - E

(10 × 2 = 20)

Q9)

a) Differentiate between phase and pass.

b) What are the components of system software?

c) What is assembly language?

d) Differentiate between compiler and interpreter.

e) What is a macro?

f) How does a scanner use look ahead technique for lexical analysis?

g) How many passes are required for the design of direct linking loader?

h) Why the size of page is always power of 2?

i) What is the difference between scheduler and dispatcher?

j) List functions of operating system.