MCA (Sem. - 4th)

SYSTEM SOFTWARE

SUBJECT CODE : MCA - 403(N2)

Paper ID : [B0117]

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

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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.**

3) Use of Non-Programmable **Scientific Calculator** is allowed.

Section - A   [1 x 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)   Write down designing on the first Pass of assembler.

Section - B   [1 x 10 = 10]

Q3) (a)   Explain in detail features of macro facility.

(b)   What are various functions of loader? During what stage of loading each of them is performed in different schemes of loader.

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

(b)   Discuss pure and impure interpreter.

Section - C   [1 x 10 = 10]

Q5) Explain phases of a compiler in detail.

Q6) Discuss the code generation in detail and also discuss different loop optimization techniques.

Section - D   [1 x 10 = 10]

Q7) (a) Define scheduler and explain all the types of scheduler.

(b) What is the structure of the page table and explain the methods for storing page tables along with advantages and disadvantages?

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

Section - E   [10 x 2 = 20]

Q9) a) Explain dynamic tagging used by document editors.

b) What is system software?

c) What is base register?

d) Differentiate between pattern and lexeme.

e) Compare the properties of macros and subroutines.

f) List two advantages of binding at load time over binding at assembly time.

g) Why is it necessary to relocate a program in memory?

h) What is the advantage of segmentation over paging memory management scheme?

i) What are the functions of dispatcher?

j) List functions of operating system.

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