

MCA/M08  
System Programming  
Paper MCA -404/405  
Option (ii)

Time : 3 Hours

MM:50

Note:- Attempt any Five questions in all, Select at least One question from each unit. All Questions carry equal marks.

UNIT-I

- 1 Explain the process of back patching to tackle the problem of forward references in single pass assembly scheme. Use suitable example.
- 2 What do you understand by System Software? Write a detailed note on the evolution of system software.
- 3(a) List the activities carried out in analysis and synthesis phase of assembly.
- (b) What are the different tables and files used in two pass assembler? Explain

UNIT-II

- 4 What do you understand by Chomsky hierarchy of languages? Discuss the different types of grammar using suitable examples.
- 5 What do you understand by code optimization. Use suitable examples.
- 6 What short notes on the following:
  - (i) Compiler-complier
  - (ii) Operator precedence parsing.
- 7(a) What do you understand by regular expression? Explain the procedure of converting a regular expression into the corresponding regular grammar. Use suitable example.
- (b) What do you understand by macro? Compare and contrast the properties of macros and subroutines with respect to the following:
  - (i) Code space requirements
  - (ii) Execution speed
  - (iii) Flexibility and generality.

UNIT-III

- 8 What do you understand by program relocation? Explain the process of relocation and distinguish between absolute loader and relocating loader.
- 9(a) What is debug monitor? What are the facilities provided by it? Explain.
- (b) "Self relocating programs are less efficient than relocatable programs." Comment.
- 10 Write short notes on the following:

- (a) Software tools for program development
- (b) Overlays.