

Total No. of Questions – 8] [Total No. of Printed Pages – 2

BE-IV/6(A)

212794

COMPUTER ENGINEERING

COURSE NO. COM 403

(System Programming)

Time Allowed – 3 Hours

Maximum Marks - 100

Note: Attempt five questions in all selecting at least two questions from each Section. Each question carries 20 marks.

SECTION – A

1. How a two pass assembler differs with one-pass assembler? List the tasks performed by the analysis and synthesis phases of an assembler.

2. (a) Describe various components of system software.
(b) Discuss General Machine structure. (10, 10)

3. (a) Explain the role of macros in programming and implementation of macros within an assembler.
(b) What is text editor? Explain the types and data structures for a Text editor. (12, 8)

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(2)

4. (a) Discuss the software tools for program development.
(b) Write short note on:
(i) Incremental compiler
(ii) Macros cell within macros
(iii) Interpreters.

SECTION – B

5. (a) Explain the direct linking loader scheme with the help of block diagram.
(b) With respect to system programming, discuss how functional modularity can be achieved. (10, 10)
6. Discuss various phases of a compiler with databases and algorithm of each phase.
7. (a) A compiler is described as a translator. Could any of its phases be described as interpreters? Which ones? Also give the difference between a phase and pass of compiler.
(b) Write short note on parsing techniques. (12, 8)
8. Explain the following:
(a) Storage allocation
(b) General loader scheme
(c) Features of HLL. (5, 5, 8)

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