

Total No. of Questions – 8]

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BE-IV/6(A)

214625

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. (a) What is the importance of system software in a computer system? Give an example of a system software and explain how the overall performance of the system depends on it.
(b) Discuss the features of macro facility. (10, 10)
2. Draw and explain the general machine structure. Explain with example different data formats of IBM 360/370.
3. Give the databases used by pass – 1 and pass – 2 of assembler. Explain the problems faced by a one-pass assembler. How can we overcome with the problems faced by the one pass assembler? Explain the algorithm of pass 2 assembler.
4. Discuss the basic features and applications of:
(i) Text editor (ii) Debug monitors

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(2)

Section – B

5. (a) Explain absolute loader scheme with its advantages and disadvantages.
- (b) What are different loading schemes? Explain with example. What do you mean by dynamic loading? (8, 12)
6. (a) Explain in brief the advantages of using high level languages over that of Assembly languages.
- (b) Explain what do you mean by functional modularity of programming languages.
- (c) Write short note on storage allocation. (5, 5, 10)
7. (a) Explain the concept of parameter passing mechanisms with suitable examples.
- (b) Discuss the features of linking and relocation. (10, 10)
8. (a) Draw a block diagram of the phases of a compiler and indicate the main function of each phase.
- (b) Write short note on parsing techniques. (12, 8)

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