(i) Printed Pages : 2   Roll No. ....

(ii) Questions   : 9

Sub. Code : | 3 | 6 | 0 | 9 |

Exam. Code : | 0 | 4 | 5 | 9 |

M.Sc. Information Technology 1ˢᵗ Semester

(2123)

OPERATING SYSTEM CONCEPTS

Paper—MS–42

Time Allowed : Three Hours]   [Maximum Marks : 80

INSTRUCTIONS

i.   Question Paper consists of *nine* questions comprising *two* questions in each section and *one* compulsory question of short answer type.

ii. The students are required to attempt any one question from Section A, B, C and D and Section E is compulsory.

SECTION—A

1. How modern operating system evolved from simple batch processing to real time systems ? Also give the features of each type of operating system.   16

2. What are the various factors determining the performance of scheduling algorithm and explain round robin scheduling technique in detail.   16

SECTION—B

3. What is synchronization and critical section problem ? Explain Dining philosopher problem in detail.   16

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4. Explain System Deadlock with necessary conditions and what are various strategies to handle deadlock in detail. 16

SECTION—C

5. Explain paging and segmentation. Describe comparison between paging and segmentation in detail. 16

6. What is page replacement algorithm and explain various types in detail ? 16

SECTION—D

7. Explain various file allocation methods with advantages and disadvantages in detail. 16

8. Explain Disk scheduling and difference between SCAN and C-SCAN algorithms with advantages and disadvantages. 16

SECTION—E

9. Elaborate : 4×4=16

    (a) Process Control Block

    (b) Cache Memory

    (c) Swapping

    (d) Thrashing.