Roll No. ....   Total Pages : 03

GSM/J-21   1638
COMPUTER SCIENCE
Operating System
Paper : II

Time : Three Hours]   [Maximum Marks : 40

Note : Attempt *Five* questions in all, selecting *one* question from each Unit. Q. No. **1** is compulsory. All questions carry equal marks.

(Compulsory Question)

1. (a) What is a difference between System Cell and System Program ?   **2**

    (b) What are different process states ?   **2**

    (c) Compare External and Internal Fragmentation. **2**

    (d) What is File System ?   **2**

Unit I

2. Discuss the role of operating system as 'Resource Manager'.

                                                   8

3. Write notes on the following :

   (a) Multiprogramming and Time Sharing Operating
       System   4

   (b) System Programs.   4

Unit II

4. What is Processor Scheduling ? Explain scheduling criteria
   and level of scheduling.   8

5. (a) Differenatiate between the following :   4

       (i) Process and Program

       (ii) Pre-emptive and Non-preemptive Scheduling.

   (b) Explain deadlock detection and Recovery Method. 4

Unit III

6. (a) What do you mean by Race Condition ? Explain
       with example.   3

   (b) Discuss Contiguous Memory allocation techniques. 5

7. Write notes on the following :

   (a) Virtual Memory   4

   (b) Thrashing.   4

Unit IV

8. (a) What is File Management System ? Write its functions. **3**

    (b) Explain various File Access methods. **5**

9. What is Disk scheduling ? Explain with examples any *four* disk scheduling algorithms. **8**