

Roll No. ....

Total Pages : 3

**3993/M**

**M-26/2051**

**OPERATING SYSTEMS**

Paper-BCA-323

Semester-VI

Time allowed : 3 Hours] [Maximum Marks : 75

**Note:** The candidates are required to attempt two questions each from sections A and B carrying 15 marks each. Section C consisting of 8 short answer type questions.

**SECTION-A**

1. Define operating system? Explain various types of operating Systems. 15
2. (a) Discuss the services performed by an operating system. 7  
(b) Compare FCFS and SJF scheduling algorithms with suitable example. 8

3. Write short note on the following : 15
  - (a) Threads
  - (b) Scheduling criteria
  - (c) Operating System components
  - (d) System Calls
4. What do you understand by a process? Explain various states and operations on processes. 15

**SECTION- B**

5. What are deadlocks? Explain main characteristics of deadlocks. Discuss Banker's Algorithm for deadlock prevention with suitable example. 15
6. (a) What do you mean by demand paging? How it is implemented? Explain. 9  
(b) Compare contiguous and linked file allocation methods. 6

7. Compare FIFO, SSTF and C-SCAN methods of disk scheduling with example. 15
8. Explain in detail various contiguous memory allocation techniques. 15

### SECTION-C

9. (i) What are the needs of an operating system? 3
- (ii) Differentiate between physical and logical address space. 2
- (iii) Discuss criteria used to measure CPU performance. 2
- (iv) What do you mean by thrashing? 2
- (v) What is swapping? Explain. 2
- (vi) What are System Calls? Give example. 2
- (vii) What is virtual memory? 2