Roll No. .....

Subject Code—8050

P.G.D.C.A./M.C.A. EXAMINATION

(Main/Re-appear Batch 2009 Onwards)

(Second Semester)

(MCA 3 Years)

MS-08

OPERATING SYSTEM

Time : 3 *Hours* *Maximum Marks :* 70

Section A

Note : Attempt any *Seven* questions. 7×5=35

1. Discuss in brief the evolution of operating systems.

2. What is the difference between multi-programming and multi-tasking operating systems ?

3. Discuss the various scheduling criterion.

4. Define deadlock. What are the necessary conditions for occurrence of deadlocks ?

5. Define critical section problem.

6. Define and distinguish between paging and segmentation methods of memory management.

7. What is the difference between logical and physical address space ?

8. Discuss memory management in LINUX operating system.

9. Explain thrashing with suitable example.

10. What are the various methods of file protection ? Discuss any *one* in brief.

Section B

Note : Attempt all the questions.

11. Discuss the various types of operating systems in detail. 12

Or

The following is the information relating to some processes :

Process	Burst	Priority	Arrival Time
P1	29	1	0
P2	14	5	6
P3	10	3	8
P4	8	1	10
P5	6	2	13

Using the above information, compute the average waiting time and average turnaround time for each processs for the following algorithms :

(a) Shortest Job First

(b) Pre-emptive Shortest Job First

(c) Priority Scheduling

(d) Pre-emptive Priority Scheduling

(e) Round Robin (with time quantum of 3 units).

Note : Ignore the arrival time for non-pre-emptive algorithms.

12. Discuss in detail the segmentation technique of memory management. 12

Or

Define demand paging. Discuss the various page replacement algorithms giving examples.

13. Discuss the issues concerning Disk Scheduling and explain the various algorithms available for disk scheduling with the help of suitable examples. Also discuss the problem of starvation. 11

Or

Discuss the Windows Operating System in the light of process scheduling, memory management, file and I/O system.