# [07 – 3115]

## III/IV B.Tech. DEGREE EXAMINATION.

### First Semester

### Computer Science and Engineering

### OPERATING SYSTEMS

(Common with I.T.)

(Effective from the admitted batch of 2004–2005 and after batches)

Time : Three hours        Maximum : 70 marks

First questions is compulsory

Answer any FOUR from the remaining questions

All questions carry equal marks

Answer all parts of any questions at one place

1. Explain the following

   (a) System call

   (b) Process control block

   (c) Scheduling criteria

   (d) Thrashing

(e) Roll back

(f) Asynchronous I/O

(g) Inooce.

2. (a) What are the functions of an operating system?

   (b) Explain the structure of an operating system.

3. (a) Explain the concept of virtual machine.

   (b) Write and explain monitor solution for producer consumer problem.

4. (a) What is the defference between preemptive and non preemptive scheduling?

   (b) Explain paging with segmentation.

5. (a) What is fragmentation? Explain internal and external fragmentation.

   (b) Explain the different file allocation method.

6. (a) What are the conditions of dead lock? Explain with example.

   (b) Explain about dead lock detection and recovery.

7. (a) Explain different disk scheduling algorithms.

   (b) Explain access control list as a protection mechanism.

8. Explain the following

   (a) IPC

   (b) Process management in MS-DOS

   (c) Device drivers.