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II/IV B.Tech (Supplementary) DEGREE EXAMINATION**April, 2017****Third Semester****Time:** Three Hours**Common for CSE & IT****Operating Systems****Maximum : 60 Marks***Answer Question No.1 compulsorily.**(1X12 = 12 Marks)**Answer ONE question from each unit.**(4X12=48 Marks)**(1X12=12 Marks)***1. Answer all questions**

- Describe the objectives of Operating Systems.
- Describe Process Control Block (PCB).
- List any three differences between Thread & Process
- What is race condition?
- Define waiting time
- List the types of semaphores
- What is a Dead Lock?
- List necessary condition for Dead Lock.
- What is contiguous memory allocation?
- What is a File?
- What are File attributes?
- Define Directory.

UNIT I

2. What is a "System Call" ? list the types of system calls. [12 M]

(OR)

3. Describe in detail about Types of scheduling queues & types of schedulers [12 M]

UNIT II

4. Explain CSP through Reader – writer Problem. [12 M]

(OR)

5. Consider the following set of process with the length of the CPU burst time given in milliseconds. [12 M]
The process are assumed to have arrived in the order 1,2,3 all at the time zero.

Process	CPU Burst Time
P1	24
P2	3
P3	3

- Draw Gantt chart that indicates the execution of these processes using the Scheduling Algorithms FCFS & SJF.
- What is waiting time of each process for each of these scheduling algorithms?
- What is turnaround time of each process for each of these scheduling algorithms?

UNIT III

6. Explain about deadlock avoidance with Bankers algorithm with an example [12 M]

(OR)

7. Explain memory management techniques : paging & segmentation [12 M]

UNIT IV

8. Explain file system mounting, file sharing & file protection. [12 M]

(OR)

- 9.a Discuss types of directory implementation [4 M]
9.b Explain different disk space allocation methods [8 M]