

[April-14]

[EURCS 404A]
B.Tech. Degree Examination
Computer Science & Engineering
IV SEMESTER

OPERATING SYSTEMS

(Effective from the admitted batch 2012–13)

Time: 3 Hours

Max.Marks: 60

Instructions: Each Unit carries 12 marks.

Answer all units choosing one question from each unit.

All parts of the unit must be answered in one place only.

Figures in the right hand margin indicate marks allotted.

UNIT-I

1. a) What are system calls? Give an example of how system calls are used. List out system call types 6
b) Explain the operating system services in detail 6

OR

2. a) Enumerate the concept of multitasking. Explain the special programs used to generate a system 6
b) Give brief description on Distributed Systems and Real Time Embedded Systems 6

UNIT-II

3. a) Explain multithreading. Distinguish between single threaded process multithreaded process 6
b) Explain Peterson's solution to Critical Section Problem 6

OR

4. a) Define context switching. Explain queuing diagram representation of process scheduling 6
b) Write short notes on monitors and semaphores 6

UNIT-III

5. a) Explain deadlock characterization and wait-for a graph in detail 6
b) What are the different methods used for handling deadlocks?

Explain 6

OR

6. a) Explain deadlock avoidance with suitable example 6
b) Explain Banker's algorithm 6

UNIT-IV

7. Consider the following page reference string
1,2,3,4,2,1,5,6,2,1,2,3,7,6,3,2,1,2,3,6
How many page faults would occur for the following page
replacement algorithms?
a) FIFO b) Optimal c) LRU with four frames 12

OR

8. a) Explain paging in detail with paging Hard Ware (TLB) 6
b) Explain in detail about the thrashing 6

UNIT-V

9. a) Give brief description about the I/O performance 6
b) Explain about Access Matrix concept in the protection 6

OR

10. Give brief description about the various disk scheduling algorithms 12

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