

Roll No.

Total Pages : 2

8514

BT-5/D09

OPERATING SYSTEMS

(2005-06)

Paper : IT-357

Group (II)

Opt.(ii)

Time : Three Hours]

[Maximum Marks : 100

Note : Attempt *five* questions in all, selecting at least *one* question from each unit.

UNIT-I

1. (a) Explain in detail Single processor systems and Multiprocessor systems. 10
(b) What is an Application ? Why do we say that operating system is a H/W application, but a utility is an application of the operating system ? 10
2. (a) Write a note on Content switching. 5
(b) Define a Process. What is it used for ? What is the difference between User and Kernel process ? 10
(c) In what way are utilities similar to user application ? In what way are they different ? 5

UNIT-II

3. (a) What are Deadlock conditions ? What is deadlock detection and recovery ? 10
(b) Write a note on Multiple queues with feedback. 10

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4. Explain various Scheduling algorithms, and also discuss comparative assessment of different algorithms. 20

UNIT-III

5. Write notes on the following :
- (a) Virtual devices.
 - (b) Block allocation.
 - (c) Graph directory.
 - (d) Logical file system. 5×4=20
6. (a) What is a Bit map used in a file system space management ? Explain it with an example. 10
- (b) Consider a file system with a logical block size 2096 bytes and physical block size 512 bytes. Let X be the logical address of a file. Explain how the physical address for X will be computed in contiguous and linked allocations, assuming a pointer size of 4 bytes. 10

UNIT-IV

7. (a) Explain NFS architecture and protocol. 10
- (b) Explain Network operating system. 10
8. (a) Differentiate UNIX and LINUX operating systems. 10
- (b) Explain Deadlock handling strategies. 10