6E3206

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B.Tech VI Sem. (Main & Back) Exam., May. 2013
Computer Engg.
6CS6.1 Advance Topics in Operating System
Common to CS & IT

Time: 3 Hours   **Maximum Marks: 80**
                                     Min. Passing Marks: 24

Instructions to Candidates:

*Attempt any **five questions**, selecting **one question** from **each unit**. All questions carry **equal** marks. Schematic diagrams must be shown wherever necessary. Any data you feel missing suitably be assumed and stated clearly.*

Units of quantities used/calculated must be stated clearly.

Use of following supporting material is permitted during examination.

1._____   2._____

UNIT – I

Q1. (a) What is operating system? Explain structure of operating system with suitable diagram. [8]

(b) What are windows threads? Explain how thread approach improves performance of operating system. [8]

OR

Q1. Write short notes on the following:

(a) Java Virtual machine in O.S.

(b) Microkernel for O.S.

(c) Remote Procedure Call

(d) Client Server model [16]

UNIT – II

Q2. (a) What is file system? Explain allocation method in detail. [8]

(b) What is RAID structure? Explain levels of RAID in detail. [8]

OR

Q2. Write short notes on the following:

(a) Virtual file system

(b) Universal serial bus

(c) Disk caching

(d) Boot block in disk management [16]

UNIT – III

Q3. (a) Describe the basic design principles used in Linux operating system. [8]

(b) Explain process management for Linux operating system. How Linux is secure compared to other operating systems. rtuonline.com [8]

OR

Q3. Write short notes on the following :

(a) Inter – process communication for Linux O.S.

(b) File System Structure

(c) Kernel Structure for Linux O.S.

(d) Types of Shells in Linux [16]

UNIT – IV

Q4. (a) Explain system component of windows O.S. in detail. [8]

(b) Explain process scheduling in windows O.S. in detail. [8]

OR

Q4. Write short notes on the following:

    (a) NTFS file system

    (b) Multithreading in Operating Systems

    (c) POSIX Subsystem

    (d) Disk Mirroring   [16]

UNIT – V

Q5. (a) What is multiprocessor operating system? Explain the kernel structure of multiprocessor operating system.   [8]

    (b) Explain Real Time scheduling in conventional operating system. What are functions of multimedia operating system?   [8]

OR

Q5. Write short notes on the following:

    (a) Architecture of Multiprocessor O.S.

    (b) Palm O.S. and JAVA cards

    (c) Video Stream Management

    (d) Mobile Operating System   [16]