



MCA DEGREE IV SEMESTER EXAMINATION MAY 2014

CAS 2401 OPERATING SYSTEM
(Regular and Supplementary)

Time: 3 Hours

Maximum Marks : 50

PART A
(Answer *ALL* questions)

(15 x 2 = 30)

- I. (a) Explain inter process communication.
(b) What is system call? Explain with an example.
(c) Explain threads.
- II. (a) What is real time scheduling?
(b) What are the different criteria for selecting a scheduling algorithm?
(c) Explain semaphore.
- III. (a) Explain paging.
(b) What is thrashing?
(c) Explain NFS.
- IV. (a) What are kernel data structures?
(b) What is disk formatting?
(c) Explain swap space management.
- V. (a) What are threats? Explain any two types of threats.
(b) Discuss any two authentication mechanisms.
(c) Differentiate between intrusion detection and prevention.

PART B

(5 x 4 = 20)

- VI. Explain operating system services.
OR
- VII. Explain storage structure and storage hierarchy.
- VIII. Explain any two CPU scheduling algorithms.
OR
- IX. What are the necessary conditions for deadlock to occur? What is resource allocation graph?
- X. Explain different allocation methods.
OR
- XI. Explain virtual memory.
- XII. Explain different disk scheduling methods.
OR
- XIII. Explain RAID and tertiary storage structure.
- XIV. Explain cryptography.
OR
- XV. Write notes on:
 - (i) Access matrix
 - (ii) Capability based system