

B.Tech. VI Semester (Main/ Back) Examination, May 2015
Computer Science
6CS6.1 Advanced Topics in Operating Systems
Common for 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.

UNIT - I

1. Explain the following with example from Linux & Windows :

- i) RPC
- ii) Micro Kernel
- iii) Exokernels
- iv) Client - Server Model

(4×4=16)

(OR)

1. a) Explain the advance concepts of threads and its types. (8)
- b) Explain the monolithic layered structure of an operating system. (8)

UNIT - II

2. What is file system? Explain various file system implementation methods in operating system. (16)

(OR)

2. a) Explain computer security and its classifications. (8)
- b) What is disk management? Explain swap-space management? (8)

UNIT - III

3. a) Explain various differences in Unix and Linux operating system. (8)
b) What is process management? Explain process scheduling in Linux. (8)

(OR)

3. a) Explain network file system and its implementation. (8)
b) Explain the following :
i) Inter - Process communication.
ii) Booting & login process. (4×2=8)

UNIT - IV

4. a) Explain the system components in window operating system. (8)
b) Explain the following :
i) MS-DOS Environment
ii) 16-bit Windows Environment. (4×2=8)

(OR)

4. a) Explain the technical improvements of NTFS over FAT file system. (8)
b) Explain the following:
i) Security Features
ii) Window registry. (4×2=8)

UNIT - V

5. a) What is multiprocessor operating system. Explain its architecture. (8)
b) Explain common audio file format and its types. (8)

(OR)

5. a) Explain multimedia file system and its storage mechanisms. (8)
b) What is mobile operating system? Explain Symbian & palm OS. (8)