



K16P 0100

Reg. No. :

Name :

I Semester M.C.A. Degree (Reg./Sup./Imp.) Examination, February 2016
(2014 Admn. Onwards)

MCA1C03 : OPERATING SYSTEMS

Time : 3 Hours

Max. Marks : 80

Instructions : Section – A : Answer any ten questions. Each question carries three marks.

Section – B : Answer all questions. Each question carries ten marks.

SECTION – A

Answer any ten questions. Each question carries three marks. (10×3=30)

1. What are the different types of distributed operating system ?
2. Compare and contrast real time and time sharing operating system.
3. What are the responsible activities of OS connection with disk management ?
4. Define system calls and corresponding functions.
5. What are the differences between user-level threads and Kernel-supported threads ?
6. Compare and contrast preemptive and nonpreemptive scheduling.
7. What the significant features of internal and external fragmentation ?
8. How the logical address is mapped to the address in the physical memory in case of paged memory management ?
9. What are the merits of linked file allocation method ?
10. Define super block and semaphore.
11. List out the advantages of a DFS compared to normal file system.
12. What are the significant features of the NFS architecture ?

P.T.O.



SECTION – B

Answer all questions. Each question carries ten marks.

(5×10=50)

13. a) i) What are the significant features of building distributed system ? 5
 ii) Compare and contrast batch processing system distributed processing systems. 5
 OR
- b) i) With neat diagram explain briefly working structure of I/O system. 5
 ii) List out various system components explain any two of them briefly. 5
14. a) i) Discuss the importance of various operations on process. 5
 ii) What are the principles of interprocess communication ? 5
 OR
- b) i) Describe the criteria used for CPW scheduling algorithms. 5
 ii) Define critical section problem. What are the essential requirements for a better solution to the critical section problem ? 5
15. a) i) With neat diagram explain the multisteps processing of a user program. 5
 ii) Explain the structure of the page table. 5
 OR
- b) i) Discuss the importance of First-fit and Worst-fit allocation algorithm. 5
 ii) List out the various page replacement algorithm. Explain any one of them briefly. 5
16. a) i) Explain the process of steps in a DMA transfer. 5
 ii) What are the applications of I/O interface ? 5
 OR
- b) i) Discuss with suitable example importance of SCAN scheduling. 5
 ii) Describe the properties of tertiary storage devices. 5
17. a) i) Explain with examples Naming and Name resolution of the systems in the network. 5
 ii) Compare and contrast caching and remote service in distributed file structure. 5
 OR
- b) i) Discuss the concept of domain structure briefly. 5
 ii) Describe any two approaches for the authentication problem. 5