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Reg. No. : .....

Name : .....

Seventh Semester B.Tech. Degree Examination, November 2015
(2008 Scheme)
08.704 (C) : MODERN OPERATING SYSTEMS (E)

Time : 3 Hours Max. Marks : 100

PART – A

Answer **all** questions : **(10×4=40 Marks)**

1. Explain about the layered OS structure.
2. What is spin lock ? How can it be avoided ?
3. Explain the feature of tree structured directory.
4. When is a system said to be in a safe state ? Explain with example.
5. What is the purpose of paging the page table ?
6. What is the difference between global and local page replacement strategies.
7. Discuss any two page replacement algorithms.
8. What is the function of a device controller ?
9. Discuss about various RAID levels.
10. Explain FAT.

PART – B

Answer **any one** question from **Each** Module : **(3×20=60 Marks)**

Module – I

11. a) Discuss about the different OS structure. **10**

    b) What is a system call ? Explain the different categories into which they can be grouped. **10**

OR

12. a) Provide two examples in which multi threading is not better than a single threaded solution. **10**

    b) Explain the Banker's algorithm for deadlock avoidance. **10**

P.T.O.

Module – II

13. a) Explain the concept of virtual memory. How is the page fault servicing done ? 10

    b) Discuss the FCFs page replacement algorithm. Illustrate an occurrence of Belady's anomaly. 10

OR

14.a) How is the free space management done in memory. 10

    b) With neat diagram, explain demand paged memory allocation scheme. 10

Module – III

15. a) Discuss the disk scheduling algorithms with example. 10

    b) Write notes on indexed file allocation method and linked allocation method. 10

OR

16. a) Suppose a disk has 200 cylinders numbered 0 to 199 starting from the outermost cylinder. The disk has just serviced I/O request from cylinder 1 and from 30. Next I/O request arrive at roughly the same time in the following sequence – 10, 125, 75, 190, 105, 50, 145. Calculate the total distance in cylinder moved by disk arm from current position if the disk scheduling algorithm is (i) FCFs (ii) SSTF (iii) SCAN (iv) C-SCAN (v) Elevator. 12

    b) Explain about file sharing and file protection. 8
