



Code No. : 5238/O

FACULTY OF ENGINEERING
B.E. 2/4 (CSE) II Semester (Old) Examination, May/June 2012
OPERATING SYSTEMS

Time : 3 Hours]

[Max. Marks : 75

Note : Answer *all* questions of Part A.
Answer *five* questions from Part B.

PART – A

(25 Marks)

1. What are the five major activities of an operating system with regarding file management ? 3
2. Why is it important for the scheduler to distinguish I/O bound programs from CPU bound programs ? 2
3. What is thrashing ? 2
4. In what situations would using memory as a RAM disk be more useful than using it as a disk cache ? 3
5. What are the necessary conditions for dead lock situation ? 2
6. What is meant by critical section problem ? 3
7. What is Boot Block ? Where it is stored ? 2
8. What are the advantages and disadvantages of supporting memory mapped I/O to device control registers ? 3
9. List the layers of network structure in LINUX. 2
10. What is the importance of process manages in Windows XP ? 3

PART – B

(50 Marks)

11. a) Explain about process control block. 5
b) Explain about importance of a medium term scheduler. 5

(This paper contains 2 pages)



12. a) Explain the mechanism of paging with page table and Paging Hardware. 6
b) What is the minimum number of page faults for an optimal page replacement strategy for the given reference string with four page frames ? 4
1, 2, 3, 4, 5, 3, 4, 1, 6, 7, 8, 7, 8, 9, 7, 8, 9, 5, 4, 5, 4, 2.
13. a) What is the purpose of monitors in 'Dinning-philosophers' problem ? 6
b) What are the various mechanisms of implementation of Access Matrix ? 4
14. a) Discuss about N-step-SCAN policy for disk scheduling. 5
b) What is I/O Buffering ? Explain different types of buffers. 5
15. a) Briefly describe the components of linux system. 5
b) Discuss about cache manages in Windows XP. 5
16. a) Discuss about threads. Explain any two multithread models. 6
b) Write about process switching vs context switching. 4
17. Write short note on : (3+4+3)
i) Feed back scheduling
ii) Mutual exclusion
iii) File Allocation Methods.
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