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Question Paper Code: 31844

B.E. / B.Tech. DEGREE EXAMINATION, NOV 2016

Fourth Semester

Information and Technology

01UIT404 - PRINCIPLES OF OPERATING SYSTEM

(Regulation 2013)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 2 = 20 Marks)

1. Define Context switch.
2. Mention the features of real time systems.
3. What is preemptive and non preemptive scheduling.
4. Is it possible to have a deadlock involving only one process.
5. What are overlays?
6. Why should we use virtual memory?
7. List the various file attributes.
8. What are the operations that can be performed on a directory?
9. What is tertiary storage?
10. What do you mean by WORM Disk?

PART - B (5 x 16 = 80 Marks)

11. (a) (i) What are the system components of an operating system and explain them. (10)
(ii) Write about the various System calls. (6)

Or

- (b) (i) Explain about Inter Process Communication. (8)
 - (ii) Explain in detail about the Threading issues. (8)
12. (a) Write about the various CPU scheduling algorithms in detail. (16)

Or

- (b) (i) Write in detail about Deadlock avoidance. (8)
 - (ii) Explain the classic problems of Synchronization. (8)
13. (a) (i) Explain about contiguous memory allocation. (10)
- (ii) Write about the techniques for structuring the Page table. (6)

Or

- (b) (i) Explain the various Page Replacement strategies. (8)
 - (ii) What is Thrashing and explain the methods to avoid Thrashing. (8)
14. (a) (i) Explain directory structure in file system implementation. (8)
- (ii) Write notes about the Protection strategies provided for files. (8)

Or

- (b) (i) What are the various methods for Free space management. (8)
 - (ii) How are the processes and Threads executed in Linux? (8)
15. (a) Discuss about I/O Systems and I/O Hardware in detail. (16)

Or

- (b) Explain about Disk scheduling and Disk Management techniques. (16)