

# **SATHYABAMA UNIVERSITY**

(Established under section 3 of UGC Act, 1956)

Course & Branch: B.E/B.Tech – CSE / IT

Title of the paper: Operating Systems

Semester: IV

Max. Marks: 80

Sub.Code: 12407(2002/2003/2004/2005)/ 211407

Time: 3 Hours

Date: 27-04-2007

Session: FN

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## **PART – A**

(10 x 2 = 20)

Answer ALL the Questions

1. What are the two types of Batch System?
2. State the two interfaces of a Device Manager
3. List the basic memory hierarchy?
4. Mention how a process can flow through a system that has only one CPU
5. What are the methods of Deadlock Prevention?
6. How to simplify the complexity of the synchronization problems?
7. How to bound check with a limit register?
8. List the steps taken by an OS on pagefault.
9. Specify the fields in file descriptor.
10. State the organization of memory mapped files.

## **PART – B**

(5 x 12 = 60)

Answer All the Questions

11. Classify and explain about the functions provided by an Operating System.  
(or)
12. List and explain the ways of implementing device management.

13. Give examples and explain the non preemptive strategies of Scheduling.

(or)

14. (a) List the steps in initializing the operating system.

(b) Describe about the fields in process descriptor.

15. Explain about the message based Inter Process Communication Mechanisms.

(or)

16. State and explain Bankers' algorithm.

17. Describe about the memory manager strategies.

(or)

18. Explain the following static paging algorithms

(a) Demand Paging algorithms (8)

(b) Stack algorithms (4)

19. Distinguish Authentication and Authorization Mechanisms.

(or)

20. Write Notes on

(a) Directory data structure

(b) Structured Sequential files and Indexed Sequential files