



LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

B.Sc.DEGREE EXAMINATION – COMPUTER SCIENCE

FIFTH SEMESTER – APRIL 2017

CS 5504- OPERATING SYSTEM

Date: 20-04-2017
Time: 01:00-04:00

Dept. No.

Max. : 100 Marks

PART-A

ANSWER ALL THE QUESTIONS:

(10 x 2 = 20 marks)

1. Define spooling.
2. Define interprocess communication.
3. What is meant by daemons?
4. What are the conditions that must be present for a deadlock to occur?
5. Compare and contrast logical address space and physical address space.
6. Why are segmentation and paging sometimes combined into one scheme?
7. What is memory-mapped I/O?
8. What do you mean by cycle stealing?
9. Define network-attached storage
10. What are the categories of the Unix utility programs?

PART-B

ANSWER ALL THE QUESTIONS:

(5 x 8 = 40 marks)

11. a) Explain the layered systems design in the operating system structure.
(Or)
b) List out the POSIX system calls associated with the file management.
12. a) Discuss about the process states with a state diagram.
(Or)
b) Explain in detail about Resource-Allocation Graph.
13. a) Differentiate between Paging and segmentation
(Or)
b) Explain the difference between internal and external fragmentation
14. a) What are the goals of the I/O software?
(Or)
b) Describe in detail about the RS-232 Terminal Hardware.
15. a) Describe some common file extensions in the file naming mechanism.
(Or)
b) Explain the types of files in Linux.

PART-C

ANSWER ANY TWO QUESTIONS:

(2*20=40 marks)

16. a) Explain the system calls and its type in detail.
b) Describe the file system supported by virtually all operating systems.
17. a) Discuss in detail about any five page replacement algorithms.
b) Describe the sequence of events involved in page fault handling.
18. a) Explain the Disk scheduling algorithm with an example..
b) Explain the Win32 Application Programming Interface in Windows 2000.