

**LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034**



**B.Sc. & B.C.A. DEGREE EXAMINATION – COMPUTER SCIENCE & APPLICATION**

**FIFTH SEMESTER – APRIL 2018**

**CS / CA 5510– OPERATING SYSTEMS**

Date: 30-04-2018  
Time: 09:00-12:00

Dept. No.

Max. : 100 Marks

**SECTION A**

**ANSWER ALL THE QUESTIONS**

**10 X 2 = 20**

1. List down various Operating System services.
2. What is a Process Control Block and what are all the information associated with it?
3. Define Dispatcher.
4. What are the various conditions for deadlock occurrence?
5. What is dynamic loading?
6. Define Segmentation.
7. State the role of virtual memory in memory management.
8. List various file operations.
9. Define Buffering.
10. What is the need of a bootstrap program?

**SECTION B**

**ANSWER ALL THE QUESTIONS**

**5 X 8 = 40**

11.a. Explain about Operating System Structure.

**(OR)**

b. What are threads? Write down the role of threads in process management.

12. a. Write about various methods to recover from deadlock.

**(OR)**

b. What is critical section in a process? Explain the solution to overcome it.

13. a. Explain about swapping in detail.

**(OR)**

b. Write about the basics of paging with neat diagrams.

14. a. Discuss on various file access methods.

**(OR)**

b. Write about various file protection methods.

15. a. Discuss on free space management.

**(OR)**

b. Explain about Application I/O interface.

## SECTION C

ANSWER ANY TWO QUESTIONS

2 X 20 =40

16. a. Explain about Inter Process Communication.  
b. Write about deadlock avoidance algorithm.
17. a. Explain dynamic loading and linking.  
b. Explain about various directory structures.
18. a. Explain various file allocation methods.  
b. Discuss on contiguous memory allocation.in detail.

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