



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

**B.C.A. DEGREE EXAMINATION – COMPUTER APPLICATIONS**

**FIFTH SEMESTER – NOVEMBER 2016**

**CA 5504 – OPERATING SYSTEM**

Date: 01-11-2016

Dept. No.

Max. : 100 Marks

Time: 09:00-12:00

**PART – A**

**Answer ALL the Questions:**

**(10 x 2 = 20 marks)**

1. Define Operating system.
2. Write down the services provided by an operating system.
3. What is Mutual exclusion?
4. What is Semaphore?
5. Define Paging.
6. What is Virtual Memory?
7. What is meant by Memory mapped I/O?
8. What is Spooling?
9. Differentiate absolute and relative path.
10. What is segment register?

**PART – B**

**(5x8=40 marks)**

**Answer ALL the Questions**

11. a. Explain the processes of Operating system.  
(or)  
b. Write the various categories of System calls.
12. a. Write a short notes on Semaphores.  
(or)  
b. Explain the Dining philosophers problem.
13. a. Explain Associative memory in detail.  
(or)  
b. Write a short note on Swapping.
14. a. Write a short note on principles of I/O Software.  
(or)  
b. Explain about Graphical User Interface.
15. a. Explain File system Implementation.  
(or)  
b. Explain the Fundamental concepts of UNIX.

**PART – C**

**Answer any TWO questions:**

**(2x20=40 marks)**

16. a. Explain in detail about Operating system structure.

b. Write a short note on inter process Communication.

17. a. Explain Page Replacement Algorithm.

b. Briefly explain about Disks.

18. a. (i) Write any five directory related commands in Linux.

(ii) Write any five file related commands in Linux.

**(5+5)**

b. Explain about Direct Memory Access.

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