LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

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

FIFTH SEMESTER – **NOVEMBER 2018**

16UCA5MC03/ CA 5510 – OPERATING SYSTEM

Date: 30-10-2018 Dept. No. Max. : 100 Marks

Time: 09:00-12:00

Section – A (10 X 2 = 20 marks)
ANSWER ALL THE QUESTIONS

1. Write any two objectives of OS?
2. What do you mean an inter-process communications?
3. What is critical section?
4. Give the example of deadlock occurrence and explain how it occur and solve it.
5. What are the advantage and disadvantage of fixed partitioning of memory?
6. How physical address space is mapped.
7. Define virtual memory.
8. What is use of a file directory?
9. How will you manage free space management?
10. Mention any two features of Linux OS.

Section – B (5 X 8 = 40 marks)

ANSWER ALL THE QUESTIONS CHOOSING EITHER (a) OR (b)

11. a) List out the system call for process management.

(OR)

b) Draw the process state transition diagram and define the states.

12. a) Discuss in detail the strategies for denying various necessary condition of deadlock.

(OR)

b) Explain with an example, the method of avoiding deadlock.

13.a) Discuss in detail about the concept of paging.

(OR)

b) Write a short note on dynamic loading.

14. a) What are the desirable characteristics of page replacement?

(OR)

b) Explain the file system protection.

15. a) Describe the hierarchical Linux file system.

(OR)

b) Discuss in detail about disk scheduling.

Section – C (2 X 20 = 40 marks)
ANSWER ANY TWO QUESTIONS

16. Explain in detail how semaphores and semaphore operations can be implemented in the nucleus of the operating system.

17. Explain with an example, the virtual memory management system.

18. Explain in detail about the allocation method in secondary storage with example.

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