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Name

Reg. No· · · · · · · · · · · · · · ·

THIRD SEMESTER M.Sc. DEGREE EXAMINATION, DECEMBER 2014

(CUCSS)

Computer Science

CSC 3C 01—OPERATING SYSTEMS

Maximum : 36 Weightage

Time : Three Hours

Part A

*Answer **all** questions.*
Each question carries 1 weightage.

1. Differentiate between a mode switch and a process switch.

2. What are the four basic thread operations ? Explain.

3. What is a Process Control Block ?

4. Explain Thrashing.

5. What is 110 buffering ?

6. Write a short note on Load Sharing.

7. What are the kernel mode components of Windows operating system ?

8. Explain Page buffering.

9. Explain the four basic types of user mode processes supported by Windows.

10. List and briefly define three techniques for performing I/O.

11. What is a real time operating system ?

12. What are the objectives of file management systems ?

(12 x 1 = 12 weightage)

Part B

Answer any six questions.
Each question carries 2 weightage.

13. Briefly explain the architecture of modern UNIX operating systems.

14. Briefly discuss the multithreaded architecture implemented in Solaris.

15. Discuss the benefits of a microkernel organization.

16. Briefly discuss the concurrency mechanisms of Windows operating system.

17. Briefly explain the paged virtual memory implemented in UNIX SVR4.

Turn over

18. Explain briefly how Linux performs real time and non-real time scheduling.

19. Explain the different modes of I/O operations supported in Windows.

20. Write notes on process and thread priorities in Windows scheduling.

21. Explain the key features of the Windows file system.

(6 x 2 = 12 weightag(

Part C

Answer any **three** *questions.*
Each question carries 4 *weightage.*

22. Briefly explain UNIX SVR4 process management.

23. Explain and compare how processes and threads are handled in Windows and Linux.

24. Discuss the memory management scheme of Linux.

25. Explain the various approaches for multiprocessor thread scheduling and processor assignment

26. Explain the Unix file system.

27. Discuss the different types of I/O in UNIX.

(3 x 4 = 12 weightage)