C 4717 **(Pages : 2)** **Name.....**

Reg. No.....

SECOND SEMESTER M.Sc. DEGREE EXAMINATION, JUNE 2016

(CUCSS)

Computer. Science

CSS 2C 02—OPERATING SYSTEM CONCEPTS

(2014 Admissions)

Time : Three Hours Maximum : 36 Weightage

Part A

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

1. What are the services provided by the Operating Systems ?
2. List and explain the conditions for deadlock.
3. What is meant by thrashing ?
4. Give any *two* goals of tiny. OS.
5. What is client/server computing ?
6. Define multi-threading.
7. List the requirements for mutual exclusion.
8. Differentiate between reusable resource and consumable resource.
9. What is meant by demand paging ?
10. What is meant by priority inversion ?
11. Define the term embedded system.
12. Explain the role of middle ware.

(12 x 1 = 12 weightage)

Part B

Answer any **six** *questions.*
Each question carries a weightage of 2.

13. What are the common events lead to the creation of a process ?
14. What is the difference between binary and general semaphore ?

Turn over

15. Explain the role of long term, medium term and short term scheduler with proper diagrams.

16. With neat diagram, explain the three tier client/server architecture.

17. Explain two categories of thread implementation.

18. Explain the conditions for Deadlock. How deadlock can be described in term of resource allocation graph ?

19. What are the characteristics of a real time operating system ?

20. Explain the organization of embedded system with neat diagram.

21. How does client/server differ from any other distributed processing solutions ?

(6 x 2 = 12 weightage)

Part C

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

22. (a) Explain the reasons for process termination.

(b) Draw the UNIX process state transition diagram and explain.

23. Explain any *two* page replacement algorithms.

24. Explain distributed message passing in a single system.

25. Explain Bankers algorithm for deadlock avoidance.

26. Explain service oriented architecture.

27. Explain eCos scheduler.

(3 x 4 = 12 weightage)