



QP CODE: 23145665



Reg No : .....

Name : .....

**M Sc DEGREE (CSS) EXAMINATION, DECEMBER 2023**

**First Semester**

M.Sc.Computer Science (Data Analytics)

**CORE - CA030103 - ADVANCED OPERATING SYSTEMS**

2020 ADMISSION ONWARDS

0341D1AF

Time: 3 Hours

Weightage: 30

**Part A (Short Answer Questions)**

*Answer any **eight** questions.*

*Weight 1 each.*

1. Define a multiprocessor system.
2. What is meant by traditional computing ?
3. Write short notes on Process.
4. Differentiate Preemptive and Non-preemptive Scheduling.
5. Distinguish between Deadlock prevention and Deadlock avoidance.
6. Which are the different types of data structures used for Banker's Algorithm?
7. What is external fragmentation?
8. What is page fault in memory management?
9. What do you mean by Open source Software?
10. What are the different zones of physical memory in linux ?

(8×1=8 weightage)

**Part B (Short Essay/Problems)**

*Answer any **six** questions.*

*Weight 2 each.*

11. Differentiate memory management and storage management .
12. What are the two common models of interprocess communication ?
13. Write a note on Multithreaded models.





14. Write a note on Round Robin algorithm.
15. Explain the three necessary conditions for a Critical section problem.
16. Explain different types of possibilities to Recover from a Deadlock
17. Explain dynamic linking.
18. What are the kernel modules in Linux?

(6×2=12 weightage)

**Part C (Essay Type Questions)**

*Answer any **two** questions.*

*Weight 5 each.*

19. Explain different operating system structures with necessary diagrams .
20. Explain various operations on process.
21. Explain Dining Philosophers Problem of Synchronization.
22. Briefly explain different page replacement algorithms.

(2×5=10 weightage)

