QP CODE: 24045684

24045684

Reg No : .....

Name : .....

M.Sc DEGREE (CSS) EXAMINATION, DECEMBER 2024

First Semester

M.Sc COMPUTER SCIENCE (DATA ANALYTICS)

CORE - CA030103 - ADVANCED OPERATING SYSTEMS

2020 ADMISSION ONWARDS

51397609

Time: 3 Hours Weightage: 30

Part A (Short Answer Questions)

*Answer any **eight** questions.*

*Weight **1** each.*

1. What is meant by mass storage management ?
2. How do you define client server computing ?
3. What are the different Message passing techniques used in interprocess communication. ? Explain.
4. What is Round - Robin Scheduling algorithm? Explain.
5. Define Mutual – exclusion implementation with Swap() instruction.
6. What do you meant by Hold and Wait condition?
7. How is free space management performed?
8. Discuss the causes and solution for page fault.
9. Define conflict resolution in Linux.
10. How do the linux system manges its page mechanism?

(8×1=8 weightage)

Part B (Short Essay/Problems)

*Answer any **six** questions.*

*Weight **2** each.*

11. Explain multicore systems with its advantages over single processor systems .
12. Briefly explain different types of system calls .
13. Write a note on queue scheduling.
14. Write a note on Multithreded process.
15. Explain the usage of Semaphores.

16. Explain the three main issues for Resource preemption with deadlock.

17. Explain why it is easier to share a reentrant module using segmentation than it is to do so when pure paging is used.

18. How do linux manages the files using cat command?

(6×2=12 weightage)

Part C (Essay Type Questions)

*Answer any **two** questions.*

*Weight **5** each.*

19. Write note on :- (a) Layered approach (b) Microkernel approach.

20. Explain Process Scheduling.

21. Explain about Deadlock Characterization.

22. Explain with diagram the memory management scheme by using address binding and logical and physical address space.

(2×5=10 weightage)