

CSSR & SRRM DEGREE & PG COLLEGE

(AUTONOMOUS)

UG (CBCS) REGULAR EXAMINATIONS, OCT- 2025

B.Sc(CS), SEMESTER-III

MAJOR: OPERATING SYSTEMS

(w.e.f. 2024-25 Admitted Batch)

Time: 3 hrs.

(No additional sheet will be supplied)

Max. Marks: 70

SECTION – A

I. Answer any **FIVE** questions. Each Question Carries 4 Marks

5 X 4 =20 M

1. What is an operating system and its basic functions?
2. What is resource abstraction?
3. What is process abstraction?
4. What is kernel? Explain different types of kernels?
5. What is deadlock? How to avoid deadlock?
6. Explain Reader – writer problem in process synchronization.
7. What is paging in memory management?
8. Differentiate between physical and virtual address space.
9. Explain about shared memory in operating system?
10. Explain about Device management in operating system?

SECTION – B

II. Answer **All questions**. Each Question Carries 10 Marks

5 X 10 =50 M

11. What is an operating system? Explain its basic functions.
Or
12. Explain in detail about multiprogramming and batch operating systems.
13. What is a system call? Explain different types of system calls in operating system.
Or
14. What is scheduling? Explain about preemptive and non – preemptive scheduling algorithms.
15. What is deadlock? Discuss various strategies for avoiding deadlock in a system.
Or
16. Explain the classical synchronization problem of producer-consumer using semaphores.
17. Explain about segmentation in operating system.
Or
18. Explain about memory allocation strategies in operating system.
19. Explain about the directory structure in operating system.
Or
20. Explain the working of C-SCAN, C-LOOK AND FCFS scheduling algorithms.