

Reg. No. :

Name :

V Semester B.C.A. Degree (CBCSS – OBE – Regular/Supplementary/ Improvement) Examination, November 2023 (2019 – 2021 Admissions) Core Course 5B12BCA – OPERATING SYSTEMS

Time : 3 Hours

Max. Marks : 40

SECTION – A (Short Answer)

Answer all questions.

1. What are the advantages of multiprogramming ?

2. Differentiate between system programs and application programs.

3. What is the purpose of CPU scheduler ?

4. Define deadlock.

5. What is sector sparing ?

6. List the various file attributes.

SECTION – B (Short Essay)

Answer any 6 questions.

7. What is the use of system calls ?

8. Which are the states of a process ?

9. Write a note on scheduling queues.

10. What is meant by memory protection ?

(6×1=6)

(6×2=12)

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11. What is the use of TLB ?

12. Briefly explain the SCAN algorithm for disk scheduling.

13. What are the procedures that I/O subsystem supervises ?

14. Write short note on interrupts.

SECTION – C (Essay)

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Answer any 4 questions.

15. What are the operating system services that are helpful to the user ?

16. How to create a process ? Explain.

- 17. Differentiate between internal and external fragmentation with example.
- 18. Briefly explain disk management.

19. Differentiate between non-blocking and asynchronous I/O.

20. Write a note on I/O Scheduling.

SECTION – D (Long Essay)

Answer any 2 questions.

- 21. Explain any three operating system structures.
- 22. Explain about deadlock recovery mechanisms.
- 23. How demand paging is implemented in virtual memory system ? Explain.
- 24. Explain different file allocation methods in detail.

 $(4 \times 3 = 12)$

 $(2 \times 5 = 10)$