



Avinashilingam Institute for Home Science and Higher Education for Women
Deemed to be University Estd. u/s 3 of UGC Act 1956, Category 'A' by MHRD (now MoE)
Re-accredited with 'A++' Grade by NAAC. CGPA 3.65/4, Category I by UGC
Coimbatore - 641 043, Tamil Nadu, India

Continuous Internal Assessment Test II – October 2025
I SEMESTER

Class : I UG
Major: B.Voc (AI & ML)

Time: 2 hours
Maximum Marks: 60

23VAIC04 Operating System

Course Outcomes:

1. Discuss the evaluation of operating systems.
2. Explain different resource managements performed by operating system.
3. Describe the architecture in terms of functions performed by different types of operating systems.
4. Analyze the performance of different algorithms used in design of operating system components.
5. Describe the I/O managements and file managements performed by different design of operating systems.

Part-A

6x1=6

Choose the correct answer

1. Which scheduling method assigns a fixed time slice to each process in a cyclic order? CO3K2
a. FIFO b. Shortest Job First c. Round Robin d. Priority Scheduling
2. What is the primary objective of deadline scheduling in operating systems? CO3K1
a. Turnaround time b. Maximize throughput c. Meet deadlines d. Reduce waiting
3. What is a thread in the context of operating systems? CO4K1
a. Process b. Subprocess c. Lightweight process d. Task
4. Which of the following is a necessary condition for deadlock to occur? CO4K2
a. Mutual exclusion b. Preemption c. non-blocking d. Process termination
5. Which mechanism mainly controls file access in an operating system? CO5K2
a. File permissions b. File descriptors c. File allocation d. File compression
6. What is the main purpose of segmentation in an operating system? CO5K1
a. Memory management b. Scheduling c. Deadlock d. Paging

Part- B

3x6=18

Answer ALL Questions

Each answer should not exceed 400 words or two pages

- 7.a. Describe the scheduling levels with a neat diagram. CO3K3
(or)
- 7.b. Compare round robin scheduling and Deadline scheduling. CO3K2
- 8.a. Write a short note on simple resource deadlock. CO4K2
(or)
- 8.b. Explain about the thread models. CO4K3
- 9.a. Describe about file access control. CO5K3
(or)
- 9.b. Explain about segmentation. CO5K2

Part-C

3x12=36

Answer ALL questions

Each answer should not exceed 800 words or four pages

- 10.a. Explain first in first out scheduling and shortest process first scheduling in detail. CO3K2
(or)
- 10.b. Elaborate on real time scheduling. CO3K3
- 11.a. Explain the concepts of deadlock detection and deadlock recovery. CO4K1
(or)
- 11.b. Define thread and explain about the thread operations. CO4K3
- 12.a. Discuss virtual memory and how virtual memory management works. CO5K4
(or)
- 12.b. Explain about file allocation in detail. CO5K3

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