



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)
Re-accredited with 'A++' Grade by NAAC. Recognised by UGC Under Section 12B
Coimbatore - 641 043, Tamil Nadu, India

Department of Computer Science

Continuous Internal Assessment Test - I August 2025
Semester III

Class: II UG
Major: Computer Science

Time: 2 Hours
Max. Marks: 60

23BSC05 Operating Systems

Course outcomes:

1. Obtain knowledge to know about the types of algorithms
2. Understand the concepts of kernels and threading concepts
3. Learning about Deadlocks and their types
4. Develop skills on Memory Management
5. Trained skills in Android Applications

Part A
Choose the Correct Answer

(6x1 = 6)

1. Which of the following is an example of an operating system?
a. MS Word b. Google Chrome c. Windows 10 d. Intel Processor **CO1K1**
2. A process is considered to be in the 'ready' state when:
a. It is scheduled to run after completing some execution
b. It is waiting for some task to complete before proceeding
c. It is actively executing on the CPU
d. It relies on the execution time of another process **CO1K1**
3. Which of the following process state transitions is incorrect?
a. Blocked → Running b. Ready → Running c. Blocked → Ready d. Running → Blocked **CO2K2**
4. Which of the following is a non-preemptive scheduling algorithm?
a. Round Robin b. Priority Scheduling
c. First-Come, First-Served d. Shortest Remaining Time First **CO2K2**
5. Which of the following scheduling algorithms is preemptive in nature?
a. First-Come, First-Served b. Shortest Job Next c. Round Robin d. Priority Scheduling **CO2K2**
6. What is the function of the dispatcher in the process scheduler of an operating system?
a. Moving ready processes to the waiting queue
b. Shifting running processes to the blocked queue
c. Assigning ready processes to the CPU
d. Scheduling ready processes for termination **CO3K2**

Part B
Answer the following

(3 x 6 = 18)

Answer should not exceed 400 words or two pages

7. a. Define an operating system and explain its basic functions. **CO1K2**
(or)
- 7.b. Discuss the concept of resource abstraction. **CO1K2**
8. a. Discuss in detail the processor mode and User Mode. **CO2K3**
(or)
8. b. Write a note on thread Libraries. **CO2K3**
9. a. Compare and contrast Non-Pre-emptive and Pre-emptive Scheduling Algorithms. **CO3K2**
(or)
9. b. What is a deadlock? Explain the necessary conditions for deadlock occurrence. **CO3K2**

Part C

(3 x 12 = 36)

Answer the following

Answer should not exceed 800 words or four pages

10. a. Elaborate on (a) Time Sharing Systems (b) Real-time systems. CO1K3
(or)
10. b. Elaborate on (i) Process States (ii) Process Control Blocks. CO1K3
11. a. Elaborate on (i) System Calls and (ii) System Programs. CO2K3
(or)
11. b. Discuss in detail (i) Threads (ii) Thread types (iii) differences between process and thread. CO2K2
12. a. Discuss in detail the process scheduling algorithms with examples CO3K4
(or)
12. b. Discuss in detail (i) Banker's algorithm (ii) Resource allocation graph. CO3K4

Staff In Charge : Dr. B.Sarojini, Mrs. J. Sangeetha Priya

No. of Copies : 57 + 54