



**Avinashilingam Institute for Home Science and Higher Education for Women**  
(Deemed to be University under Category 'A' by MHRD, Estd. u/s 3 of UGC Act 1956)  
Re-accredited with A++ Grade by NAAC. Recognised by UGC Under Section 12B  
**Coimbatore - 641 043, Tamil Nadu, India**

**Continuous Internal Assessment Test I – August 2025**

**Semester III**

**23BITC06 – Operating Systems**

**Class : II UG**

**Time : 2 Hrs**

**Major : Information Technology**

**Max Marks : 60**

**Course Outcomes:**

1. To understand about the basics of Operating System, Process and interrupts.
2. To recognize Asynchronous Concurrent Processes and Concurrent Programming.
3. To have an in-depth understanding of deadlock and processor management.
4. To illustrate Real and virtual Storage Organization and management.
5. To infer File System and to provide an exposure to Linux Operating System.

**Part -A**

**Choose the Correct Answer**

**6 X 1 = 6**

1. Which one of the following errors will be handle by the operating system? **CO1 K1**  
a)lack of paper in printer b) connection failure in the network c) power failure d)power failure
2. The priority of a process will \_\_\_\_\_ if the scheduler assigns it a static priority. **CO1 K2**  
a)depends on the operating system b) change c)remain unchanged d) none of the mentioned
3. Threads are not Shared among Which of the following? **CO2 K3**  
a) Stack b) Program counter c) Both Stack and Program Counter d) none of the above
4. Which one of the following options can be used to inhibit the implementation of semaphores for a single processor system? **CO2 K5**  
a) Deadlock b) Interrupts c) Paging d) Lock Step
5. Which of the following are two types of atomic operations performed by semaphores. **CO3 K3**  
a) Wait, Single  
b) Wait, Stop  
c) Single, Stop  
d) Single, Wait
6. A deadlock avoidance algorithm dynamically examines the \_\_\_\_\_ to ensure that a circular wait condition can never exist. **CO3 K2**  
a) Operating System b) Resources c) System Storage State d) Resource allocation state

**Part – B**

**Answer the following**

**Answer should not exceed 400 words**

**3 X 6 = 18**

7. a. Define Operating System with example (Or) **CO1 K2**
7. b. Difference between Hardware and Software with example **CO1 K4**
8. a. What is parallel processing and its types (Or) **CO2 K3**

- 8 . b. What is Mutual Exclusion in the operating system? Explain with example CO2 K4
9. a. Define Deadlock and simple resource deadlock situations with an example. (Or) CO3 K3
9. b. Write briefly about conditions for deadlock CO3 K2

**Part – C**

**Answer the following**

**Answer should not exceed 800 words**

**3 X 12 = 36**

10. a. Explain Types of Operating System with example (or) CO1 K4
- 10 .b. What are the purpose of Process Control Blocks? CO1 K3
11. a. Elaborate on semaphores with examples (Or) CO2 K4
11. b. Explain the Concurrent processes in operating System with neat diagram. CO2 K2
12. a. Describe how a deadlock can be prevented. (Or) CO3 K3
12. b. Difference between Deadlock prevention and Deadlock Avoidance. CO3 K2

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