CENTER FOR DISTANCE AND ONLINE EDUCATION

ASSIGNMENT-JULY 2024
SUB. NAME: - OPERATING SYSTEM
MCA – 104: Online Mode

Q-1. *Define Operating System and explain its main functions. Describe the difference between process and thread. How does multithreading benefit performance?*

Q-2. *Explain the following concepts*

    a. *Process Management*   **b.** *Memory Management*   **c.** *Storage Management*

Q-3. *What are the Scheduling Criteria? Describe the Different Types of CPU Scheduling Algorithms. Write their Advantages and Disadvantages?*

Q-4. *Difference between Batch operating system and Distributed operating system.*

Q-5. *Explain the concept of virtual memory. How does it help in managing the memory efficiently?*

Q-6. **A.** *Define a Dead Lock? What are Methods for Handling Dead Locks?*

    B. *Describe File Allocation Methods in O.S.*

Q-7. *What is the difference between a monolithic kernel and a microkernel? Discuss their advantages and disadvantages.*

Q-8. *Explain the concept of a shell in an operating system. What are the differences between a command-line interface (CLI) and a graphical user interface (GUI)?*

Q-9. *Define Semaphores. Write the functions for wait () and signal () used in semaphores. Give the applications for binary semaphores and counting semaphores.*

Q-10. *Compare the features of dedicated devices, shared devices and virtual device. Give their respective applications.*