

**DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING**  
**IES IPS ACADEMY**  
**SESSION JULY-DEC 2023**

**BRANCH- COMPUTER SCIENCE & INFORMATION TECHNOLOGY**  
**CLASS- BTECH III YEAR V SEM**

**(PCC-CSIT503) (OPERATING SYSTEM)**

**Assignment I**

Q.(1) Define real time operating system? What are the factors that need to be considered to determine the degree of Multiprogramming in a system? (CO-1 & BT-1)

Q.(2) How would you define following structures of Operating System:-

- a. Monolithic System
- b. Layered System
- c. Virtual Machine
- d. Client Server System (CO-1 & BT-1)

**ASSIGNMENT II**

Q. (1) How would you apply scheduling policy for each of the following cases? Explain your reasons for choosing them:

- a. The processes arrive at large time intervals
- b. The system's efficiency is measured by the percentage of jobs completed.
- c. All the processes take almost equal amounts of time to complete. (CO-2 & BT-3)

Q.(2) What is a critical section? Give solution to the critical section problem using semaphores. (CO-2 & BT-1)

**Assignment III**

Q.(1) How would you compare between global and local page replacement policy? (CO-3 & BT-3)

Q. (2) What are demand and pre-paging? Explain Swapping & page cannibalizing? (CO-3 & BT-3)

#### **ASSIGNMENT IV**

Q.(1) How would you compare different types of disk scheduling algorithm.(CO-4 & BT-2)

Q. (2) Can you explain different attributes of a file system. (CO-4 & BT-2)

#### **ASSIGNMENT V**

Q.(1) What is the need of synchronization in distributed operating system .Explain the working of any one clock synchronization algorithm. (CO-5 & BT-1)

Q.(2) How would you compare Network, Distributed & Multiprocessor Operating System. (CO-5 & BT-1)