MCS-041: OPERATING SYSTEM

IMPORTANT QUESTIONS FOR TERM END EXAM by

Question 1: Describe the implementation of IPC using shared memory and message passing. Explain with neat, diagrams.

Question 2: Suppose the following jobs arrive for processing at the times indicated. Each job will run the listed amount of time.

Job	Arrival Time	CPU Burst Time
1	0·0	8
2	0·4	4
3	1·0	1

    (i)   Give a Gantt chart illustrating the execution of these jobs, using the non-pre-emptive FCFS and SJF scheduling algorithms.

    (ii)   What is the turn around time and waiting time of each job for the above algorithms ?

Question 3: Explain various Multiprocessor Interconnection Networks.

Question 4: Differentiate between SCAN and C-SCAN disk scheduling algorithms. Using an example, explain the steps. Also give a brief note on RAID.

Question 2: Explain the structure of Unix and Windows Operating Systems.

Question 3: Explain the different approaches for implementing mutual exclusion in a distributed environment.

Question 4: Characterize deadlock in a system. Using a resource   allocation graph, illustrate a deadlock and explain in detail.

Question 5: Explain the design goals and design issues involved in a distributed system.

Question 6: Describe memory management in Windows 2000

Question 7: Explain various schemes used for defining the logical structure of a directory.Describe the directory structure of Unix.

Question 8: Differentiate between the following :

      (i)   Internal and External Fragmentation

      (ii)   Demand paging and Demand segmentation

      (iii)   Fixed and Variable partition

      (iv)   First fit, Best fit and Worst fit

Question 9: Explain Take-Grant Model for security and protection of an operating system.