2010

1. State True or False:

   (a) An operating system is a program that manages the computer hardware.

   (b) A time-shared operating system allows many users to share the computer simultaneously.

   (c) Parallel system has one CPU in close communication.

   (d) Multiprogramming also allows time sharing.

   (e) The occurrence of an event is usually signaled by an interrupt from either the hardware or the software.

   (f) Main memory is a non-volatile storage device that loses its contents when power in turned.

   (g) A more restrictive type of real time system is soft-real-time-system.

   (h) Software are may trigger an interrupt by executing a special operation called a system call.

   (i) System calls provide the interface between a process and the operating system.

   (j) A distributed system is a collection of processors that share memory peripheral devices or a clock.

2. Write notes on:

   (a) Polling

   (b) DMA

   (c) Spooling

   (d) Buffering

3. Differentiate between:

   (a) Multitasking and Multiprogramming

(b) Parallel system Distributed system

4. (a) What is operating system? Give any five function of operating system?

   (b) What are the different types of operating system with example?

5. (a) Define Process. What is the different process state?

   (b) Describe the function of process control block with diagram.

6. (a) Define Virtual memory?

   (b) What are the different memory management algorithms?

7. Differentiate between:-

   a) Logical and physical addresses .

   b) Internal and External fragmentation.

8. Supposed that a disk has 5000 cylinders numbered 0 to 4999 . the drive is currently serving a request at a cylinder 143 and the previous request was at cylinder 125 .the queue of pending request in fifo order is 86 ,1470 ,913 , 1774 ,948 ,1509 ,1022 ,1750 ,130 .starting from the current head position ,what is the total distance that the disk arm moves to satisfy the entire pending request for each of the following disk scheduling algorithms?

   a. FCFS
   b. SSTF
   c. SCAN
   d. LOOK

9. Define cryptography. What are the advantages of encrypting data stored in the computer system?