UNIT-1

Operating System Concept

Short Questions (2 Marks)		
1.	Define an operating system. What is primary goal of OS?	
2.	What is an OS?	
3.	What do you mean by multitasking? Give names of OS having this feature.	
4.	What do you mean by multiprogramming?	
5.	List out OS, which are multiuser and multitasking.	
6.	List out OS that are multi tasking but not multiuser.	
7.	Explain real time operating system	
8.	What do you mean by multiprocessing system (2 times)	
9.	Define real time operating system and distributed operating system.	
10.	Differential between multiprogramming and multitasking (2 times)(Oct/nov-2016)	
11.	Explain the purpose of distributed Operating System.	
12.	What is JCL? Why it is used?	
13.	What do you mean by system call ?	
14.	What is spooling? (Oct/nov-2016)	
Long Questions		
1.	Explain difference between GUI and CUI OS.	[04]
2.	Explain difference between single user and multi user OS. Give example of each (2 times)	[06]
3.	Discuss Operating System as a Resource Manager.	[10]
4.	Discuss advantages and disadvantages of Batch processing over Serial processing.	[06]
5.	Explain time-sharing system and give some example in which it is used. OR Explain time sharing system in detail. List out advantages and disadvantages of it. (Oct/nov-2016)	[08] [07]
6.	Discuss the real-time operating system in detail. (2 times)	[08]
7.	Discuss evolution of operating system.	[08]
8.	Services provided by the operating System [3 times]	[07]
9.	Explain Single user and Multi-user operating System with example.	[07]
10.	Discuss advantages and disadvantages of Batch processing over Multiprogramming	[06]
11.	Explain batch operating system with its drawback and it solution (2 times) or write a note on batch operating system	07

12.	Write a note on multi-user operating system.	07
13.	What do you mean by multi-user system. Give example of it.	07
14.	Discuss different elements of an operating system. (Oct/nov-2016)	07
Short Notes (5 marks each)		
1.	Distributed systems. Advantages of distributed system.	
2.	Simple Batch system.	
3.	Needs of OS (2 times). Function of OS.	
4.	Multi-programmed System. [2 times] (Oct/nov-2016)	
5.	Explain spooling or define spooling. Explain its working with the necessary diagram.	

UNIT-2
Introduction to File System

Short Questions (2 Marks)		
1.	List out attributes of file. 2 times	
2.	List out the operation on directory	
3.	Define the absolute and relative path (3 times)	
4.	List out different file types. OR Explain different file types.	
5.	What source file ?	
6.	What is object file?	
7.	What is executable file? Give two form of binary executable file.	
8.	What is file? Which type of information stored in file?	
9.	What is file? List and explain the importance of file extension.	
10.	Define path name. Also explain types of path name. 2 times (Oct/nov-2016)	
11.	Explain file management system in brief (2 times)	
12.	Differentiate between sequential and relative access. (Oct/nov-2016)	
Long Questions		
1	File management functions of OS.	[08]
2	Explain different operations that OS can perform on file (2 times)	[07]
3	Explain different access methods (Sequential, Direct access methods) (2 times)	[06]
4	Explain Directory structure (single and tree structured) (3 times)	[07]
5	File system architecture.	[06]
6	Write a note on Tree-structured directories.	[07]
7	Discuss acyclic graph directories in detail. (2 times)	[07]
8	Explain direct access method in details. (3 times) (Oct/nov-2016)	[07]

9	Explain different operation performed on directory.	[05]
10	Explain Relative access method in detail.	[07]
11	Discuss two-level directory structure in detail. Also discuss advantages of two-level directory structure over single-level. OR Discuss the limitations of single level directory structure. Also explain two level directory structures. (Oct/nov-2016)	[07]
12	Explain in detail the file attributes. (Oct/nov-2016)	[07]
Short Notes (5 marks each)		
1 2	File Management File protection mechanism (2times)	

UNIT-5

Device management

Short Questions (2 Marks)		
1.	List the advantages of linked allocation over contiguous allocation.	
2.	Explain the role of DMA	
3.	Differentiate between SCAN and C-SCAN disk scheduling policy.	
4.	List out different characteristic of I/O devices. 2times. (Oct/nov-2016)	
5.	What do you mean by block device?	
6.	Does contiguous allocation suffer form external fragmentation? Justify your answer.	
7.	What is bit vector? How is it useful to manage free-space in disk?	
Long Questions		
1.	Explain free space management	[07]
2.	Explain characteristic of devices	[07]
3.	Explain contiguous allocation method. [2 times] (Oct/nov-2016)	[07]
4.	Write short note on disk space management.(Oct/nov-2016) [2 times]	[07]
5.	Discuss linked allocation method with its advantage and disadvantage	[07]
6.	Discuss disk management in detail	[07]
7.	Explain DMA in detail	[07]
8.	List and explain different characteristics of I/O devices.	[07]
9.	Explain index allocation method. (Oct/nov-2016)	
10.	Explain device driver	[04]

11.	Discuss different user rights provided by windows.	[04]
	Algorithm (8/9 marks each)	
1	Suppose that a disk drive has 5000 cylinders, numbered 0 to 4999. The disk drive is currently serving at cylinder 143, and the previous request was at cylinder 125. the queue of pending request, in FIFO order is 86,1470,913,1774,947,1509,1022,1750,130 staring from the current head position, what is the total distance that the disk arm moves to satisfy all the pending request for each of the following disk-scheduling algorithms? (1) FCFS (2) SSTF (3) SCAN	
2	Suppose that a disk drive has 300 cylinders, numbered 0 to 299. The disk drive is currently serving at cylinder 146, and the previous request was at cylinder 122. the queue of pending request, in FIFO order is 89,126,43,178,99,258,39,112 staring from the current head position, what is the total distance that the disk arm moves to satisfy all the pending request for each of the following disk-scheduling algorithms? (1) FCFS (2) LOOK (3) SCAN	
3	Suppose that a disk drive has 200 cylinders, numbered 0 to 199. The disk drive is currently serving at cylinder 35, the queue of pending request, in FIFO order is 150,125,12,180,73,5,120,158,190,50,47,23 show the disk scheduling for the following algorithms? (1) FCFS (2) LOOK (3) SCAN (4) SSTF	
4	Suppose that a disk drive has 300 cylinders, numbered 0 to 299. The disk drive is currently serving at cylinder 87, and previous request was at cylinder 82. the queue of pending request, in FIFO order is 91,123,35,186,71,14,19,58,290,189,56,7,299 show the disk scheduling for the following algorithms? (1) FCFS (2) LOOK (3) SCAN (4) SSTF	
5	Suppose that a disk drive has 200 cylinders, numbered 0 to 199. The disk drive is currently serving at cylinder 95. The queue of pending request, in FIFO order is 42,88,126,99,59,121,145,186,66,31,37,14 show the disk scheduling for the following algorithms? (1) FCFS (2) LOOK (3) SCAN (4) SSTF [OCT/NOV-2016]	

6	Suppose that a disk drive has 300 cylinders, numbered 0 to 299. The disk drive is currently serving at cylinder 148. previous request was at cylinder 124.The queue of pending request, in FIFO order is 91,128,45,180,101,261,41,114 show the disk scheduling for the following algorithms? (1) FCFS (2) LOOK (3) SCAN
7	Suppose that a disk drive has 300 cylinders, numbered 0 to 299. The disk drive is currently serving at cylinder 93.the queue of pending request, in FIFO order is 90,122,33,185,70,15,12,58,290,186,52,6,299 show the disk scheduling for the following algorithms? (1) FCFS (2) LOOK (3) SCAN (4) SSTF
8	Suppose that a disk drive has 200 cylinders, numbered 0 to 199. The disk drive is currently serving at cylinder 155.the queue of pending request, in FIFO order is 36,38,77,88,99,124,12,186,166,81,17,91 show the disk scheduling for the following algorithms? (1) FCFS (2) LOOK (3) SCAN (4) SSTF