CBCS SCHEME

USN

Fifth Semester B.E. Degree Examination, July/August 2022
Operating System

Time: 3 hrs.   Max. Marks: 100

Note: *Answer any FIVE full questions, choosing ONE full question from each module.*

Module-1

1	a.	Define Operating System. Explain the goals of a Operating System.	(10 Marks)
	b.	Explain partition based on pool based resource Allocation Strategies.	(10 Marks)

OR

2	a.	Explain the different classes of Operating System.	(10 Marks)
	b.	In Multi programming system I/O bound programs should be given higher priority then Cpu bound program. Justify this with a timing diagram.	(10 Marks)

Module-2

3	a.	Define Process. Explain the OS view of process.	(10 Marks)
	b.	Explain Fundament state transition of process and compare processes with thread.	(10 Marks)

OR

4 a. For the given set of process, perform the FCFS and SRN non – preemptive scheduling.

Processes	P_1	P_2	P_3	P_4	P_5
Arrival time	0	2	3	5	9
Service time	3	3	2	5	3

                                                     (10 Marks)

	b.	Explain Long, Medium and Short term scheduling in Time Sharing System.	(10 Marks)

Module-3

5	a.	Compare Contiguous and Non – Contiguous Memory Allocation techniques.	(10 Marks)
	b.	Explain i) Paging ii) Segmentation.	(10 Marks)

OR

6	a.	Explain Virtual Memory Management with a neat diagram.	(10 Marks)
	b.	Explain FIFO and LRU page replacement policies.	(10 Marks)

Module-4

7	a.	Explain File System and IOCS.	(10 Marks)
	b.	Explain Direct Access and Index Sequential File Organization.	(10 Marks)

OR

8	a.	Explain Allocation of Disk Space.	(10 Marks)
	b.	Explain Implementation of File access to open a File.	(10 Marks)

Module-5

9	a.	Define Message passing. Explain how to implement Message Passing.	(10 Marks)
	b.	Explain Mail boxes with its advantages.	(10 Marks)

OR

10	a.	Explain Resource State Modeling.	(10 Marks)
	b.	Explain Deadlock Defection Algorithm.	(10 Marks)

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