B.E. Computer Science & Engineering (Model Curriculum) Semester - IV
SE203CS - Operating Systems

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Notes : 1. All questions are compulsory.
2. Assume suitable data wherever necessary.
3. Illustrate your answers wherever necessary with the help of neat sketches.

1. a) Define and Explain Operating System. Explain various services provided by operating system. **8**

b) Define and explain Process. Explain with suitable diagram PCB. **8**

OR

2. a) Define Thread and Process. Differentiate Process and Threads. **8**

b) Discuss Scheduling concept. List and explain various types of Scheduler with Example. **8**

3. a) Explain: **8**

i) Monitor

ii) Semaphore

b) Explain the concept of Mutual Exclusion in detail. **8**

OR

4. a) Explain Producer Consumer problem in detail. **8**

b) Explain various classical inter-process communication problems. **8**

5. a) Explain FCFS and STRF with example. **8**

b) Explain various disk arm scheduling strategies. **8**

OR

6. a) Explain UNIX and Windows directory structure. **8**

b) Explain: **8**

i) SCAN

ii) CSCAN

7.	a)	Explain the steps in handling a page fault with appropriate diagram.	**8**
	b)	Explain the concept of Segmentation using logical addresses.	**8**

OR

8.	a)	Explain:	**8**
		i) Main Memory	
		ii) Virtual Memory	
	b)	List Various Page replacement algorithm. Discuss any two algorithm with suitable example.	**8**
9.	a)	Explain:	**8**
		i) Goals of protection	
		ii) Principle of protection	
	b)	Explain the concept of Access matrix with example.	**8**

OR

10.	a)	Explain revocation of ACCESS RIGHTS. Also explain the questions which may arise due to revocation.	**8**
	b)	Explain security problem in detail.	**8**

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