Duration: 3hrs   **[Max Marks:80]**

N.B. : (1) Question No 1 is Compulsory.
        (2) Attempt any three questions out of the remaining five.
        (3) All questions carry equal marks.
        (4) Assume suitable data, if required and state it clearly.

Q. 1		Attempt any **FOUR**	[20]
	a	Explain Goals and objectives of OS	[5]
	b	Differentiate between Preemptive and Non-preemptive scheduling algorithms	[5]
	c	Explain Resource Allocation Graph with an example	[5]
	d	Write in detail about Memory Management Requirements	[5]
	e	Discuss File access methods	[5]
Q. 2	a	Discuss Producer and Consumer problem with solution using Semaphore	[10]
	b	Explain different structures of Operating System	[10]
Q. 3	a	What is the role of PCB? Explain the structure of PCB with its disadvantages.	[10]
	b	Explain Deadlock Avoidance algorithms with example.	[10]
Q. 4	a	Explain Page Replacement Strategies with suitable examples	[10]
	b	Discuss in detail about Disk Scheduling Algorithms with an examples	[10]
Q. 5	a	Explain Memory Allocation Strategies with suitable examples	[10]
	b	Explain Five state Process model with two suspended states	[10]
Q. 6		Write short notes on Following	[20]
	a	Concept of Multithreading	[5]
	b	Principles of Concurrency	[5]
	c	TLB	[5]
	d	File Directories	[5]

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