

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]
