

N.B: 1) Question No.1. Is compulsory

2) Attempt any four questions out of remaining six questions.

Q.1.a) Explain objectives and functions of O.S. (10)

b) Explain the concept of Kernel and shell in an operating system (10)

Q.2.a) what is RTOS? Give the classification of RTOS. (10)

b) Calculate the Hit and faults Using FIFO and LRU page replacement policies for the following page sequence.(2,3,5,4,2,5,7,3,8,7) assume page frame size is 3 (10)

Q.3.a) what is Semaphore? Explain Different types of Semaphores. (10)

b) Explain message based IPC with example. (10)

Q.4.a) Describe the differences among short term, medium term and long term schedulers. (10)

b) What are the various buffering techniques? Explain each in details. (10)

Q.5.a) Explain preemptive and non preemptive Algorithms. (10)

b) Explain dead lock avoidance Algorithm. (10)

Q.6.a) Explain file accessing methods. (10)

b) Define thread? Explain type's threads. (10)

Q.7) Write short notes on any four of the following :- (20)

a) Inode

b) Race condition

c) File structure.

d) Shared memory

e) Network O.S vs. Distributed O.S