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Total No. of Questions : 08

B.Sc. (IT)   (Sem.–2)
OPERATING SYSTEMS
Subject Code : UGCA-1923
M.Code : 77655
Date of Examination : 16-07-21

Time : 2 Hrs.   Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :
 1.   **Attempt any FIVE question(s), each question carries 12 marks.**

1)   What are necessary conditions which can lead to a deadlock situation in a system? Are these conditions sufficient for deadlock to happen? Explain.

2)   Describe Banker's algorithm with help of an example and also explain what is safety sequence?

3)   Explain different page replacement algorithms.

4)   Explain different states of a process and also explain different types of schedulers.

5)   Explain Distributed Operating System, its architecture, and other issues.

6)   Draw Gantt Chart for non Preemptive FCFS, Priority, SJF, RR where quantum is 1 sec.

   P1 Arrival time is 1 sec and burst time is 3 sec

   P2 Arrival time is 0 sec and burst time 4 sec.

   P3 Arrival time is 3 sec and burst time is 2 sec.

   P4 Arrival time is 6 Sec and burst time is 1 sec.

   Priority is in sequence of P1, P2, P3, P4.

7)   a) Discuss shell and Kernel with respect to set theory, means set, and superset.

   b) Explain the concept of Thrashing.

   c) Explain Real Time systems.

8)   a) What is virtual memory ?

   b) What are the advantages of a multiprocessor system?

   c) Describe the objectives of multiprogramming.

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Any student found making any change/addition/modification in contents of scanned copy of answer sheet and original answer sheet, shall be covered under UMC provisions.