

M/E - Comp (choice based): sem-I  
Advanced operating systems.

22/5/19

Q.P. Code :13891

[Time: Three Hours]

[Marks:80]

Please check whether you have got the right question paper.

- N.B:
1. Question.No.1 is compulsory.
  2. Attempt any 3 questions from the remaining 5 questions.
  3. Draw neat diagrams wherever necessary.

- Q 1 Explain briefly
- a) Requirements of Mutual Exclusion Algorithms. 5
  - b) Design issues of Network Operating System (NOS). 5
  - c) Atomic actions and committing 5
  - d) Concurrency control model of Database Systems. 5
- Q 2
- a) Explain the serializability theorem. What is the serializability conditions for a fully-replicated database system? 10
  - b) Explain recovery in concurrent systems. 10
- Q 3
- a) Explain path-pushing algorithm for distributed deadlock detection. 10
  - b) Explain the symmetrically initiated scheduling algorithm. State the stability of the system with this algorithm. 10
- Q 4
- a) What do you mean real time system? How it is different from traditional system? 10
  - b) Explain the working of EDF and RMA real time scheduling algorithms. 10
- Q 5
- a) Explain Timestamp based and Optimistic Algorithms for concurrency control. 10
  - b) Classify the advanced Operating Systems and explain the salient features of each. 10
- Q 6 Write details note on the following 20
- a) Unix as RTOS
  - b) PCP