Mid-Semester Examination
School of Computer Engineering
Kalinga Institute of Industrial Technology
Deemed to be University
Bhubaneswar-24

Time: 1hr 30 min. ***Full Mark:25***

(Answer any *five question including question No. 1 which is compulsory)*
(The figures in the margin indicate full marks.)

1. Answer all Questions [1 × 5]

A. Differentiate between bully and ring based coordinator selection algorithms.
B. What is happened before relation / casually related events? Explain with example.
C. Explain the issues & challenges in distributed scheduling.
D. Define & differentiate between different agreement problems.
E. Define & differentiate between structure & access transparency.

2. Explain symmetrically initiated algorithm for distributed scheduling. What are the limitations of it? [5]

3. What is synchronization? How synchronization can be handled by lamport's logical clock in distributed environment? How it is different from vector clock explain with example. List some of the advantages & disadvantages from the both approaches? [5]

4. What is voting protocol? Explain Two-phase commit protocol to provide fault tolerance in distributed system. [5]

5. Differentiate between token based and non-token based mutual exclusion algorithms for distributed environment? Explain operational steps of Suzuki Kasami algorithm to achieve mutual exclusion. [5]

6. Draw & explain RPC model for both sender & receiver site over a distributed environment. Describe the process of marshalling in RPC. [5]

7. Write short notes on [2.5 x 2]

   a) Different components of DCE

   b) Deadlock detection by edge-chasing algorithm in distributed environment

Best of Luck