

## JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -3 EXAMINATION- May 2017

B.Tech/M.Tech VIII Semester

COURSE CODE: 10M11CI212

MAX. MARKS:35

COURSE NAME: Advanced Operating Systems

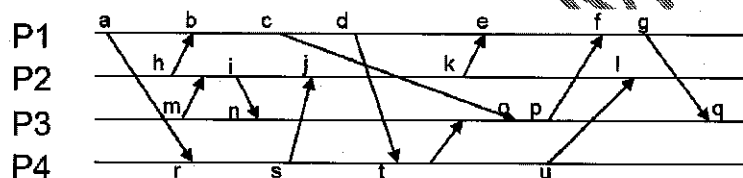
COURSE CREDITS: 3

MAX. TIME: 2 Hrs

*Note: All questions are compulsory. Carrying of mobile phone during examinations will be treated as case of unfair means.*

Q1. Write different performance metrics to analyse a mutual exclusion algorithm in distributed systems? [2]

Q2. Provide the Vector Clock timestamps for each labelled event shown in the below Figure [2]



Q3. What is the difference between Load sharing and Load balancing? [2]

Q4. How you will select a scheduling algorithm for the distributed systems? [2]

Q5. Explain various types of security risks which can occur between two communicating entities? [2]

Q6. Explain the Birman-Schiper-Stephenson (BSS) for causal ordering of the messages with the help of an example. [3]

Q7. Describe the architecture of the NFS file systems? [3]

Q8. Explain the above average distributed scheduling algorithm? [3]

Q9. What is the domino effect? Explain with an example? Describe one approach to resolve the issue of domino effect? [4]

Q10. Describe the steps of Data Encryption Standard (DES) algorithm to encrypt and decrypt the data? [4]

Q11. Write a short note on any 2 topics from the following topics [4\*2=8]

- CORBA File system
- Virtual memory in MULTICS
- Map Reduce Algorithm
- Introduction to CUDA programming