

Reg No.: _____

Name: _____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY
SIXTH SEMESTER B.TECH DEGREE EXAMINATION, APRIL 2018

Course Code: IT306

Course Name: DISTRIBUTED SYSTEMS (IT)

Max. Marks: 100

Duration: 3 Hours

PART A

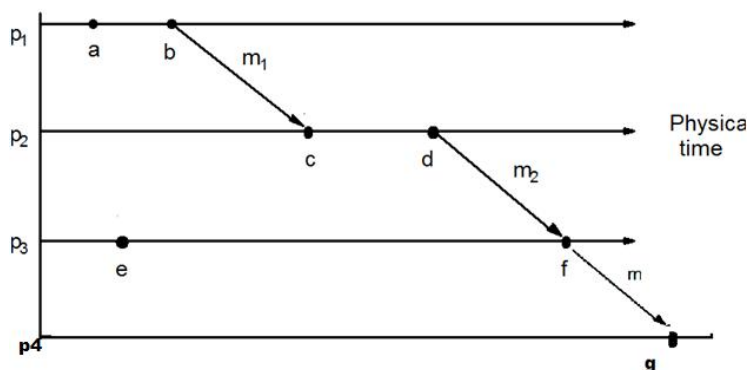
Answer any two full questions, each carries 15 marks.

- | | | Marks |
|---|--|-------|
| 1 | a) What are the functions of middleware? | (3) |
| | b) Explain the role of client stub procedure and server stub procedure. | (5) |
| | c) Compare architectural model and fundamental model. | (7) |
| 2 | a) Explain mobile code. | (2) |
| | b) Describe the classes of omission and arbitrary failures. | (5) |
| | c) With a real time example explain the relevance of event ordering. | (8) |
| 3 | a) Explain inter process communication over TCP with program. | (10) |
| | b) Define the relevance of External data representation and marshalling. | (5) |

PART B

Answer any two full questions, each carries 15 marks.

- | | | |
|---|---|------|
| 4 | a) How UFID helps in flat file service? | (2) |
| | b) What are the problems in logical clock? How is it solved using vector clock? | (5) |
| | c) Compare flat file service operations and directory service operations. | (8) |
| 5 | Explain the architecture of SUN NFS. | (15) |
| 6 | a) What is one-copy update semantics? | (3) |
| | b) Describe Name service and its motivations. | (5) |
| | c) | (7) |



Calculate vector clock value of all events

PART C

Answer any two full questions, each carries 20 marks.

- 7 Explain CORBA RMI. (20)
- 8 a) There are algorithms for choosing a unique process to play a particular role in Distributed Systems. Explain. (10)
- b) List various Consistency Models in Distributed systems. (10)
- 9 a) Describe the term byzantine general problem. (3)
- b) Compare Message passing and DSM. (5)
- c) What are the different categories of failure detectors? Compare the detection mechanisms. (5)
- d) What are the criteria for evaluating the performance of mutual exclusion algorithm? (7)
