

Total No. of Questions : 8]

SEAT No. :

PA-1447

[Total No. of Pages : 2

[5926]-63

T.E. (Computer Engineering)

DISTRIBUTED SYSTEMS

(2019 Pattern) (Semester - I) (Elective - I) (310245 C)

Time : 2½ Hours]

[Max. Marks : 70

Instructions to the candidates:

- 1) Answer Q.1 or Q.2, Q.3 or Q.4, Q.5 or Q.6, Q.7 or Q.8.
- 2) Neat diagram must be drawn wherever necessary.
- 3) Assume suitable data, if necessary.

Q1) a) Describe the importance of clock synchronization algorithm. Explain lamport's logical clock for clock synchronization. **[9]**

b) What is mutual exclusion? Explain centralized algorithm in detail with example. **[9]**

OR

Q2) a) Explain clock synchronization algorithms in detail. **[9]**

b) Describe Gossip-based contribution in detail. **[9]**

Q3) a) Describe the following in brief **[9]**

- i) Flat naming
- ii) Structured naming
- iii) Attributed based naming

b) Explain file service architecture in distributed system. **[8]**

OR

Q4) a) Describe suns network file system in detail. **[9]**

b) Why naming is significance in distributed system? Describe any two types of naming. **[8]**

P.T.O.

- Q5)** a) Describe consistency protocols in brief. [9]
b) What is replica management? Explain techniques of replica management. [9]

OR

- Q6)** a) Describe Cache coherence protocols in detail. [9]
b) Describe Data - centric consistency models in detail. [9]
- Q7)** a) What is process resilience? Describe how process resilience can be achieved. [9]
b) Explain how reliable client server communication can be achieved. [8]

OR

- Q8)** a) Describe recovery techniques in distributed system. [9]
b) Explain how consensus achieved in faulty systems. [8]
