

Code: 17F00409

MCA IV Semester Regular Examinations May 2019

**DISTRIBUTED SYSTEMS**

(For 2017 admitted batches only)

Time: 3 hours

Max. Marks: 60

Answer all the questions

\*\*\*\*\*

- 1 (a) Define distributed systems. What are the significant consequences that can occur while defining distributed systems?  
(b) Resources in the world wide web and other services are named by URLs. Give examples of three different sorts of web resources that can be named by URLs.

**OR**

- 2 (a) Explain about pervasive networking and the modern internet trend in distributed systems.  
(b) Discuss in detail about the resource sharing with respect to distributed systems.
- 3 (a) Write a short note on Peer-to-Peer architecture.  
(b) Describe and illustrate the client-server architecture of one or more major internet applications.

**OR**

- 4 (a) What is the role of proxy and skeleton in remote method invocation? Explain.  
(b) Define indirect communication. Discuss in detail about open and closed groups.
- 5 (a) Illustrate Napster's method of operation with neat diagram.  
(b) Draw and explain the structure of file attribute record.

**OR**

- 6 (a) What are the advantages and disadvantages over structured versus unstructured peer-to-peer systems?  
(b) Write a short note on Lightweight directory access protocol (LDAP).
- 7 (a) Why is computer clock synchronization necessary? Describe the design requirements for a system to synchronize the clocks in a distributed system.  
(b) Define deadlock. Explain about a cycle in a wait-for graph.

**OR**

- 8 (a) Discuss about a ring-based election algorithm.  
(b) What are the advantages and drawbacks of multiversion timestamp ordering in comparison with ordinary timestamp ordering?

- 9 (a) Enumerate the steps to perform process migration.  
(b) Define thread. Specify the features of process management.

**OR**

- 10 Briefly discuss about load balancing approach.

\*\*\*\*\*