Enrollment No: _____ Exam Seat No:_____

C.U.SHAH UNIVERSITY

Summer Examination-2018

Subject Name : Distributed Systems

Subject Code : 4TE08DSY1 **Branch: B.Tech (CE)**

Semester : 8 **Date : 24/04/2018** **Time : 02:30 To 05:30** **Marks : 70**

Instructions:

(1) Use of Programmable calculator & any other electronic instrument is prohibited.
(2) Instructions written on main answer book are strictly to be obeyed.
(3) Draw neat diagrams and figures (if necessary) at right places.
(4) Assume suitable data if needed.

Q-1 **Define Following Terms.** **(14)**

a) ARP Protocol
b) RMI
c) Workstation
d) Process
e) Transparency
f) Inter Process Communication-IPC
g) Cache Memory
h) Thread
i) Kernel
j) Network Operating System
k) DOS
l) Replication
m) Mutable File System
n) Thrashing

Attempt any four questions from Q-2 to Q-8

Q-2 **Attempt all questions** **(14)**

a) Differentiate between tightly coupled and loosely coupled system.
b) Draw and Explain in details microkernel and monolithic kernel approach.

Q-3 **Attempt all questions** **(14)**

a) What is process migration? What are the main steps involved in process migration.
b) Describe Processor-pool & Workstation Server Models of Distributed System.

Q-4 **Attempt all questions** **(14)**

a) List all transparency and explain different types of transparency.
b) Explain Java RMI. What are the components and processes of Java RMI execution?

Q-5 **Attempt all questions** **(14)**

a) Briefly explain VMTP and FLIP protocol.

b) What is a Deadlock? What are the four necessary conditions for deadlock to occur? Give suitable example to provide that if any one of the four conditions is absent no deadlock is possible.

Q-6 **Attempt all questions** **(14)**

a) Which are the characteristics features of system oriented name in naming system? Describe.

b) Briefly explain Load-Balancing approaches.

Q-7 **Attempt all questions** **(14)**

a) Explain various types of file sharing semantics.

b) What is DNS? Name the type of organization of the Given DNS domain name com, edu, org, net, gov, mil, arpa.

Q-8 **Attempt all questions** **(14)**

a) Briefly define Distributed System. What are the advantages of Distributed System?

b) What is Real Time Distributed System? Explain the types of Real Time Distributed System.