

B. Tech. Sem - VIII (Inf. Tech.) (2014 COURSE) (CBCS) :

SUMMER - 2019

SUBJECT: DISTRIBUTED COMPUTING

Day : Thursday
Date : 30/05/2019

Time : 02.30 PM TO 05.30 PM
Max. Marks: 60

S-2019-2911

N. B.:

- 1) All questions are **COMPULSORY**.
 - 2) Figures to the right indicate **FULL** marks.
 - 3) Assume suitable data if necessary.
 - 4) Draw neat and labeled diagram **WHEREVER** necessary.
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Q.1 List the various models used for building distributed computing systems. (10)
With the help of a neat diagram explain any one in detail.

OR

Q.1 Why is transparency and important design issue of distributed system? State (10)
and explain various transparency aspects of a distributed system.

Q.2 What is multicast communication? Explain any one method of multicast (10)
communication.

OR

Q.2 Explain the Java RMI architecture in detail. (10)

Q.3 What is process migration? Why and when is it necessary? State the (10)
advantages of process migration.

OR

Q.3 Why is thread scheduling an important issue in design of a threads package? (10)
Explain the special features for threads scheduling which must be supported
by a threads package.

Q.4 What is mutual exclusion? Compare among centralized approach, distributed (10)
approach and token passing approach of mutual exclusion.

OR

Q.4 Explain what is deadlock? What are necessary conditions for deadlock? How (10)
the deadlocks are handled in distributed system?

Q.5 What is distributed shared memory? Explain general architecture of DSM (10)
system?

OR

Q.5 Enlist and explain types of file-sharing semantics. (10)

Q.6 Explain the types of authentication needed in a distributed system. Explain (10)
the basic approaches to authentication.

OR

Q.6 What is digital signature? What are its uses in the security of a distributed (10)
system? Give a method to create a digital signature. Describe how digital
signature can be used for ensuring message integrity in distributed system.

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