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.

Q.1 List the various models used for building distributed computing systems. With the help of a neat diagram explain any one in detail. **(10)**

OR

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

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

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 advantages of process migration. **(10)**

OR

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

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

OR

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

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

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 the basic approaches to authentication. **(10)**

OR

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

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