BACHELOR OF TECHNOLOGY (C.B.C.S.) (2014 COURSE)
B.Tech.Sem - VIII Information Technology : WINTER- 2022
SUBJECT : DISTRIBUTED COMPUTING

Day : Wednesday   Time : 02:30 PM-05:30 PM

Date : 30-11-2022   **W-13439-2022**   Max. Marks : 60

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N.B.:

1) All questions are **COMPULSORY.**
2) Figures to the right indicate **FULL** marks.
3) Draw neat labelled diagrams **WHEREVER** necessary.

Q.1   How is Distributed Computing Environment characterized? Explain the main   **(10)**
components of a Distributed Computing Environment.

OR

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

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

OR

Q.2   What are web services? How are they useful in distributed computing   **(10)**
environment? Explain the role of SOAP in web services.

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

OR

Q.3   What is the need of thread synchronization? What are the different mechanisms   **(10)**
of thread synchronization? Explain any one of those.

Q.4   What is clock synchronization? What is clock drifting? How do these affect the   **(10)**
performance of a distributed system? What are the issues in synchronizing
clocks?

OR

Q.4   What is deadlock in distributed computing? What are the conditions that result   **(10)**
in deadlock? Elaborate the techniques to avoid deadlock.

Q.5   List the features of distributed file system? What are its advantages? What are   **(10)**
the different models of distributed file systems?

OR

Q.5   What is caching in distributed file system? Compare the differences between   **(10)**
caching and replication? Which of these methods is efficient and in what
scenario?

Q.6   What is access control matrix? How is it significant in design security of   **(10)**
distributed having access control mechanism?

OR

Q.6   Enlist the goals of distributed system security. What is confinement problem?   **(10)**
How does it threaten distributed system security?

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