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

Day : Friday   Time : 02:30 PM-05:30 PM
Date : 24-06-2022   **S-13439-2022**   Max. Marks : 60

N. B. :
1) All questions are **COMPULSORY**.
2) Figures to the right indicate **FULL** marks.
3) Draw neat and labelled diagrams **WHEREVER** necessary.
4) Assume suitable data, if necessary.

Q. 1 State and explain the requirements for effective performance of peer-to-peer **(10)** middleware.

OR

Q. 1 What is the main problem in making a system highly reliable? How can the **(10)** reliability of a distributed system improved?

Q. 2 What is RPC? Elaborate the necessary elements for implementation of an RPC **(10)** mechanism.

OR

Q. 2 Which are the possible types of group communication? Explain any one in **(10)** detail.

Q. 3 What is process migration? Why is transparency an important requirement for **(10)** process migration? How is it achieved?

OR

Q. 3 What are threads? How are threads creation and threads termination important **(10)** issues in designing threads package?

Q. 4 What is vector clock? How the vector clock can be implemented? **(10)**

OR

Q. 4 What is distributed deadlock? What are types of distributed deadlocks? List **(10)** the strategies to handle deadlock in distributed computing system? Explain any two methods to prevent the deadlock?

Q. 5 What are the sharing semantics in distributed file system? Compare these file **(10)** sharing semantics in detail.

OR

Q. 5 What are consistency models? Explain any two consistency models? **(10)**

Q. 6 What are the attacks possible in distributed system? Explain in detail. **(10)**

OR

Q. 6 Explain the concept of digital signature? How the digital signature is used in **(10)** distributed computing system?

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