R18

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
B.Tech IV Year II Semester Examinations, July/August - 2022
DISTRIBUTED SYSTEMS
(Common to CSE, IT)

Time: 3 Hours   Max.Marks:75

Answer any five questions
All questions carry equal marks
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1.a) Explain the challenges in distributed systems.
  b) Explain the generations of distributed systems.   [7+8]

2.a) Explain about communication distributed objects.
  b) Explain remote procedure call (RPC).   [8+7]

3.a) Explain the core operating system components and their responsibilities.
  b) Enumerate the differences between thread and a process. Explain the thread scheduling.
                                                                                  [7+8]
4.a) Explain the requirements of a distributed file system.
  b) Explain the flat file service operations.   [7+8]

5.a) Explain the functional and non-functional requirements of peer-to-peer middleware.
  b) Give a short note on message routing infrastructure: PASTRY.   [8+7]

6.   What is distributed mutual exclusion? Explain any one algorithm to implement mutual
     exclusion.   [15]

7.a) What is a transaction? Explain nested transactions.
  b) Explain about the communication in two-phase commit protocol.   [7+8]

8.a) Explain the passive (primary-backup) model for fault tolerance.
  b) Explain in which respects DSM is suitable or unsuitable for client-server systems. [7+8]

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