



MANIPAL INSTITUTE OF TECHNOLOGY
MANIPAL
(A constituent unit of MAHE, Manipal)

VII SEMESTER B.TECH (COMPUTER SCIENCE AND ENGINEERING) DEGREE
END SEMESTER EXAMINATIONS, NOV/DEC 2018
SUBJECT: DISTRIBUTED AND CLOUD COMPUTING [CSE 4102]
REVISED CREDIT SYSTEM
DATE: 24-11-2018

TIME:03 HOURS

MAX.MARKS : 50

Instructions to Candidates:

- Answer ALL FIVE FULL questions.
- Missing data, if any, may be suitably assumed.

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| 1A. What is the security model used in distributed system? Discuss the different security threats. Explain the methods adopted to achieve secured environment in Distributed system. | 5M |
| 1B. What are the different techniques used to handle failure types that can occur in processes and networks in distributed system? | 3M |
| 1C. What factors affect the responsiveness of an application that accesses shared data managed by a server? Describe remedies that are available. | 2M |
| 2A. Explain and discuss the working and the role of each component in Remote Method Invocation with a neat diagram. | 5M |
| 2B. Explain the role of participating objects in the architecture of distributed event notification. | 3M |
| 2C. How discarding duplicate request messages and lost reply messages are handled in request reply protocol of client server communication? | 2M |
| 3A. Explain with example any two Client Centric consistency models. | 4M |
| 3B. Explain the challenges in synchronizing physical clocks in distributed systems. Use necessary diagram. | 3M |
| 3C. Explain Reference broadcast synchronization(RBS) in Wireless Networks with necessary diagrams. | 3M |

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| 4A. Explain any two cloud computing service models with examples. | 4M |
| 4B. With the help of a neat diagram explain the steps involved in the Virtual Machine Provisioning process. | 3M |
| 4C. Explain how data lock-in and standardization is a challenge in cloud computing. What are the standardization efforts to overcome this? | 3M |
| 5A. Explain how file I/O operations are handled in HDFS? Explain with suitable diagram. | 5M |
| 5B. Explain with a suitable example, how local and remote file systems accessible on an NFS client. What is hard mounting and soft mounting? | 3M |
| 5C. What are the two types of Service Level Agreements from the perspective of application hosting? | 2M |