BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(END SEMESTER EXAMINATION)

CLASS: IMSC. **SEMESTER : V**
BRANCH: MATHEMATICS AND COMPUTING **SESSION : MO/2022**

SUBJECT: CS391 INTRODUCTION TO DISTRIBUTED SYSTEM

TIME: 3:00 Hours **FULL MARKS: 50**

INSTRUCTIONS:
1. The question paper contains 5 questions each of 10 marks and total 50 marks.
2. Attempt all questions.
3. The missing data, if any, may be assumed suitably.
***4*. Before attempting the question paper, be sure that you have got the correct question paper.**
5. Tables/Data hand book/Graph paper etc. to be supplied to the candidates in the examination hall.

Q.1(a)	Why heterogeneity is implicit in Distributed System? [CO1], [BL1]	[2]
Q.1(b)	Explain software structure of a Distributed System with a neat block diagram. [CO1], [BL2]	[3]
Q.1(c)	Define Location, Concurrency and Replication Transparency with example. [CO1], [BL1]	[5]
Q.2(a)	What is Peer-to-Peer System? [CO2], [BL2]	[2]
Q.2(b)	What are the applications of Peer-to-Peer System? [CO2], [BL3]	[3]
Q.2(c)	A Peer-to-Peer File sharing system can be classified as Hybrid, Unstructured decentralized and structured, what are their essential features? Give an example of each class. [CO2], [BL2]	[5]
Q.3(a)	In a client-server model what are the options that one can choose for identifying the address of server? [CO3], [BL4]	[2]
Q.3(b)	Explain Remote Service Model and Data Caching Model of accessing files in distributed system. [CO3], [BL2]	[3]
Q.3(c)	What are the data transfer models used for accessing remote files in distributed system? Elaborate their advantages and disadvantages. [CO3], [BL2]	[5]
Q.4(a)	Define RPC and RMI. [CO4], [BL2]	[2]
Q.4(b)	What is orphan in RPC and what are the problems associated with orphans? [CO4], [BL2]	[3]
Q.4(c)	Write down the steps of Remote procedure call supported with a block diagram. [CO4], [BL1]	[5]
Q.5(a)	What is the main goal of process management in distributed system and using which concepts one can achieve it? [CO5], [BL1]	[2]
Q.5(b)	List the desirable features of a good process migration mechanism. [CO5],[BL1]	[3]
Q.5(c)	Explain the major activities associated with process migration mechanism. [CO5], [BL2]	[5]

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