

**BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI  
(MID SEMESTER EXAMINATION)**

**CLASS: IMSC.  
BRANCH: MATHS. & COMPUTING**

**SEMESTER: V  
SESSION: MO/2022**

**SUBJECT: CS391 INTRODUCTION TO DISTRIBUTED SYSTEM**

**TIME: 2 HOURS**

**FULL MARKS: 25**

**INSTRUCTIONS:**

1. The total marks of the questions are 25.
  2. Candidates attempt for all 25 marks.
  3. Before attempting the question paper, be sure that you have got the correct question paper.
  4. The missing data, if any, may be assumed suitably.
  5. Tables/Data hand book/Graph paper etc. to be supplied to the candidates in the examination hall.
- 

			CO	BL
Q1	(a) What is a Distributed System? Give at least two examples of Distributed System which you have interacted with.	[2]	1	2
Q1	(b) Differentiate centralized system and distributed system as per their characteristics.	[3]	1	4
Q2	(a) State four common characteristics which can be used to assess Distributed System.	[2]	1	1
Q2	(b) Briefly explain the following terms: (i) Access transparency (ii) Replication transparency	[3]	1	2
Q3	(a) What is Peer-to-Peer System and what are its purposes?	[2]	2	1
Q3	(b) Explain issues like management, lookup and throughput in a Peer-to-Peer network.	[3]	2	2
Q4	(a) How does the processes in distributed system communicate?	[2]	3	1
Q4	(b) Enumerate the layers of OSI reference model used as framework of communication amongst components of distributed System.	[3]	3	1
Q5	(a) If it is a client-server communication model, then how many layers would be sufficient for a client and a server to communicate? Mention the names of layers used.	[2]	3	4
Q5	(b) A client-server model is using a large sparse address space, such as the space of 64-bit binary integers for each of the processes to pick their ids, which implicit problem will arise and what would be the solution for it?	[3]	3	5

: : : : : 29/09/2022 : : : : : M