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

CLASS: MCA **SEMESTER : III**
BRANCH: MCA **SESSION : MO/18**

SUBJECT: MCA7101 DISTRIBUTED DATABASES

TIME: 3 HOURS **FULL MARKS: 60**

INSTRUCTIONS:
1. The question paper contains 7 questions each of 12 marks and total 84 marks.
2. Candidates may attempt any 5 questions maximum of 60 marks.
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)	Discuss the circumstances and reasons when and why an organization with a centralized database system would prefer to move to a distributed database environment?	[8]
Q.1(b)	What are the possible disadvantages of such a decision?	[4]
Q.2(a)	What do you mean by DBMS standardization? Explain.	[6]
Q.2(b)	Compare and Contrast C/S and P2P architectures of DDBMSs.	[6]
Q.3	Define data allocation. What are the factors that affect data allocation? Discuss different strategies for data allocation.	[12]
Q.4(a)	Discuss how authorization rules are managed in a distributed DBMS.	[6]
Q.4(b)	Briefly explain how integrity is related to database security.	[6]
Q.5(a)	Discuss the objectives of Distributed query processing. Why global query optimization is difficult in distributed DBMS. Comment on query optimization in distributed databases.	[12]
Q.6(a)	Define a transaction. Discuss the ACID properties of a transactions.	[6]
Q.6(b)	Discuss how you perform deadlock management in a distributed DBMS.	[6]
Q.7(a)	Write down the possible types of failures in a distributed system.	[6]
Q.7(b)	Explain checkpointing. How it reduces the overhead of log – based recovery.	[6]

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