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JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD MCA III Semester Examinations, February - 2021 DATABASE MANAGEMENT SYSTEMS

Time: 2 hours Max.Marks:60

Answer any five questions All questions carry equal marks

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1.a) b)	What are levels of abstraction in a DBMS? Explain. Explain class hierarchies in ER model with examples.	[6+6]
2.a) b)	Discuss about participation constraints and weak entities in ER model. Write a brief introduction to the relational model.	[6+6]
3.	Explain in detail about relational algebra operations with suitable examples.	[12]
4.	What is schema refinement? Explain motivating examples of schema refinement.	[12]
5.	Explain about 3NF, 4NF and 5NF with suitable examples.	[12]
6.a) b)	Discuss about transaction support in SQL-92. Explain concurrency control without locking.	[6+6]
7.a) b)	Write a brief introduction on crash recovery. Describe analysis phase in detail.	[6+6]
8.	Explain the following: a) The memory hierarchy b) Extendable hashing versus linear hashing. o00oo	[6+6]