



DHARMSINH DESAI UNIVERSITY, NADIAD
FACULTY OF TECHNOLOGY
B.TECH. SEMESTER V [IT]

SUBJECT: (IT502) DATABASE MANAGEMENT SYSTEM

Examination : Block Examination (Regular)
Date : 18/10/2014
Time : 3:00 to 4.15

Seat No. : _____
Day : Saturday
Max. Marks : 36

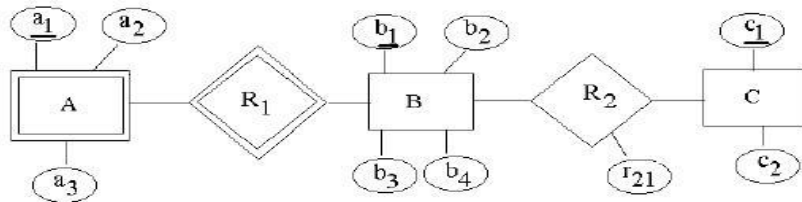
INSTRUCTIONS:

1. Figures to the right indicate maximum marks for that question.
2. The symbols used carry their usual meanings.
3. Assume suitable data, if required & mention them clearly.
4. Draw neat sketches wherever necessary.

Q.1 Do as directed.

[12]

- (a) Difference between E-R diagram and schema diagram. **[2]**
- (b) Convert following E-R Diagram into a relational database (Tables). **[2]**



- (c) Compare the shadow paging with the log-based techniques **[2]**
- (d) Two deadlock prevention techniques that use timestamps are _____ and _____ **[2]**
- (e) Explain the functionalities of the DROP, DELETE and TRUNCATE commands. **[2]**
- (f) “Each site requires a transaction manager.” Justify this statement as true or false. **[2]**

Q.2 Answer the following questions.

[12]

- (a) What is the purpose of assertions and triggers? Explain with appropriate example. **[6]**
- (b) Explain Two-phase locking protocol with example. Differentiate between strict two-phase and rigorous two-phase with conversion protocol **[6]**

Q.3 (a) What is deadlock? And How to handle deadlock detection and recovery?

[6]

- (b) Explain the concept of Conflict Serializability. **[6]**

Is below schedule is Conflict Serializable?

T1	T2
Read(A)	
Write(A)	
	Read(B)
	Write(B)
Read(B)	
Write(B)	
	Read(A)
	Write(A)