



DHARMSINH DESAI UNIVERSITY, NADIAD

FACULTY OF TECHNOLOGY

B.TECH. SEMESTER V [IT]

SUBJECT: (IT502) DATABASE MANAGEMENT SYSTEM

Examination :Block(Regular)

Seat No. : _____

Date : 19/10/2013

Day : Saturday

Time : 3.00 to 4.15

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.
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Q.1 Do as directed. [12]

- (a) In file oriented system there is [1]
(A) Data inconsistency (B) Data dependency (C) Duplication of Data (D) All
- (c) What is denormalization? [1]
- (d) State the difference between DELETE and TRUNCATE commands in sql. [2]
- (e) Every conflict serializable schedule is view serializable. State T/F and Explain. [2]
- (f) State the advantages of variable length records over fixed length records. [2]
- (g) State difference between strong and weak entity set. [2]
- (h) Given the following set of FDies $R = \{A \rightarrow BC, CD \rightarrow E, B \rightarrow D, E \rightarrow A\}$, compute candidate keys. [2]

Q.2 Answer the following questions. Any two. [12]

- (a) Explain the concept of Serializability. [6]
Is below schedule Conflict Serializable?
- | | |
|----------|----------|
| T1 | T2 |
| Read(A) | |
| Write(A) | |
| | Read(B) |
| | Write(B) |
| Read(B) | |
| Write(B) | |
| | Read(A) |
| | Write(A) |
- (c) Explain constraints on Generalization. [6]

Q.3 (a) Consider schema $R(ABCDE)$ with decomposition into $R_1(ABC)$ and $R_2(ADE)$ and [8]

- following set of FDies in $F = \{A \rightarrow BC, CD \rightarrow E, B \rightarrow D, E \rightarrow A\}$
- I. Show whether that the decomposition is Lossy or Loss less.
 - II. Show whether that it is dependency preserving or not.

- (b) Explain how 2PC protocol responds when failure of coordinator occurs. [4]