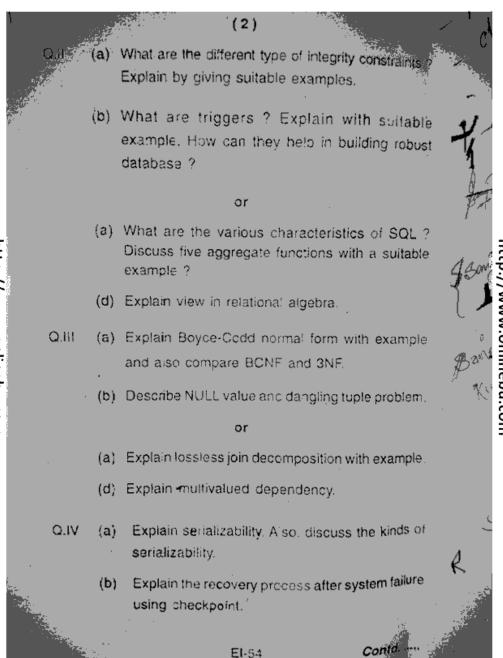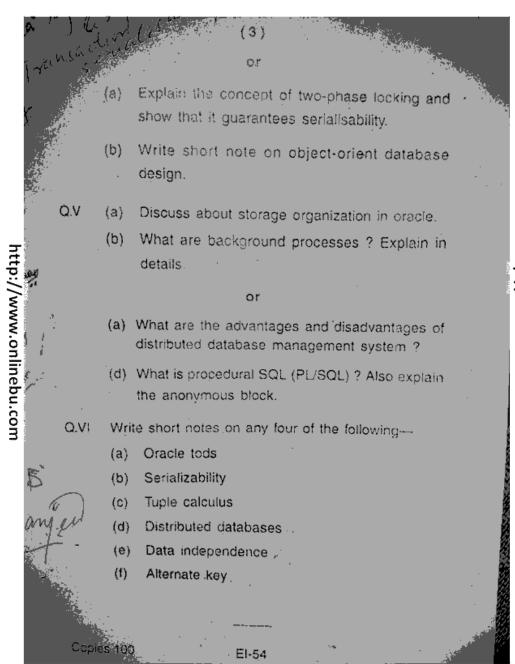## EI-54

B.E. (IIIrd Sem.) (CGPA) CSE Examination-2015

DATA BASE MANAGEMENT SYSTEM

Paper : CS-304

Time Allowed : Three Hours
Maximum Marks : 60

Note : Attempt all question.
There are internal choice of questions.
All question carry equal marks.

Q.I   (a) Describe the generalized architecture of a database system.

(b) What is the difference between a database schema and a database state ?

or

(a) Discuss main categories of data models.

(d) Explain how an ER-schema is transformed to tables.

EI-54   P.T.O.

(2)

Q.II   (a) What are the different type of integrity constraints ? Explain by giving suitable examples.

(b) What are triggers ? Explain with suitable example. How can they help in building robust database ?

or

(a) What are the various characteristics of SQL ? Discuss five aggregate functions with a suitable example ?

(d) Explain view in relational algebra.

Q.III (a) Explain Boyce-Codd normal form with example and also compare BCNF and 3NF.

(b) Describe NULL value and dangling tuple problem.

or

(a) Explain lossless join decomposition with example.

(d) Explain multivalued dependency.

Q.IV   (a) Explain serializability. Also discuss the kinds of serializability.

(b) Explain the recovery process after system failure using checkpoint.

EI-54   Contd. ....

(3)

or

(a) Explain the concept of two-phase locking and show that it guarantees serialisability.

(b) Write short note on object-orient database design.

Q.V (a) Discuss about storage organization in oracle.

(b) What are background processes ? Explain in details.

or

(a) What are the advantages and disadvantages of distributed database management system ?

(d) What is procedural SQL (PL/SQL) ? Also explain the anonymous block.

Q.VI Write short notes on any four of the following—

(a) Oracle tods

(b) Serializability

(c) Tuple calculus

(d) Distributed databases

(e) Data independence

(f) Alternate key

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