

Seat No.	
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T.E. (CSE) (Part -III) (Semester - VI) (Revised) (Theory)
Examination, November - 2017
DATABASE ENGINEERING
Sub. Code:66860

Day and Date :Friday, 03 - 11 - 2017
Time :2.30 p.m. to 4.30 p.m.

Total Marks :50

- Instructions :**
- 1) All the questions are compulsory. Provided internal options in each question.
 - 2) Figures to the right indicate full marks.

Q1) Attempt any two questions out of three

[2×7=14]

- a) Give advantages and disadvantages of DBMS
- b) Write SQL queries to perform given tasks on following schema

Sailors (sid: integer, sname: string, rating: integer, age: real)

Boats (bid: integer, bname: string, color: string)

Reserves (sid: integer, did: integer)

- i) Find the names of sailors who have reserved at least one boat.
 - ii) Find the names of sailors who have not reserved a red boat.
 - iii) Find the name and age of the oldest sailor.
 - iv) Find the age of youngest sailor who is at least 18 years old.
- c) What is functional dependency? Give different types of functional dependencies.

Q2) Attempt any two questions out of three.

[2×6=12]

- a) Compare database systems with traditional file based systems.
- b) Explain different Data Definition Language (DDL) Statements.
- c) Explain Third Normal Form and Boyce-Codd Normal Form.

Q3) Attempt any two questions out of three.

[2×6=12]

- a) What are the different physical storage media used for data storage?
- b) Explain Two-Phase Locking Protocol for Concurrency Control.
- c) Explain how records can be organized in files.

4) Attempt any two questions out of three.

[2×6=12]

- a) Compare Dense and Sparse indices
- b) Explain Optimistic Concurrency Control Mechanism.
- c) Explain Log-based Recovery Mechanism.

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