



Progressive Education Society's
Modern College of Arts, Science & Commerce Ganeshkhind, Pune – 16
End Semester Examination: Jan.2023
Faculty: Science and Technology

Program: B.Sc.Computer Science Code (BScComp05) **Semester:** I

SET:B

Program (Specific): Computer Science

Class: F.Y.B.Sc.(Computer Science)

Name of the Course: Database Management Systems

Course Code: 22-CS-112

Paper: II

Course Type: CC

Max.Marks: 35

Time: 2Hr

Instructions to the candidate:

- 1) *There are 4 sections in the question paper. Write each section on a separate page.*
- 2) *All Sections are compulsory.*
- 3) *Figures to the right indicate full marks.*
- 4) *Draw a well labeled diagram wherever necessary.*

SECTION: A

Q1) Multiple Choice Question

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I) If the decomposition is able to represent all the facts about the relation then such decomposition is called as-

- | | |
|---------------------------|---------------------------|
| a) Lossless Decomposition | b) Lossy Decomposition |
| c) Secure Decomposition | d) Insecure Decomposition |

II) ----- is a collection of data

- | | |
|-------------|----------|
| a) EXIST | b) FROM |
| c) Database | d) RDBMS |

III) SQL keyword used to specify the table to be used

- | | |
|----------|-----------|
| a) EXIST | b) FROM |
| c) SET | d) SELECT |

IV) Which sign is used to represent a functional dependency

- a)Physical level b)conceptual level
- c)View level d) All of the above

V) Which of the following is single valued attribute

- a)Address b)Register_no
- c)Subject_no d) Reference

Q2) Very Short Answer Questions (Attempt any 4/6)

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- I) Enlist types of functional dependencies
- II) What are the basic building blocks of DBMS?
- III) What is DDL?
- IV) What is super key?
- V) List out different types of attributes?
- VI) What is Normalization?

SECTION: B

Q3) Short Answer Questions (Attempt any 4/6)

8

- I) What are the advantages of DBMS?
- II) Write a short note on Anomalies due to redundant data.
- III) Explain task manager.
- IV) State different types of users of DBMS.
- V) State the advantages of DBMS.
- VI) Consider a relation employee(empno,empname,empsalary) and write query in SQL:
 - (i)List names of employees having a salary less than 50,000

SECTION: C

Q4) Short Answer Questions (Attempt any 4/6)

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- I) Draw the diagram of the level of data abstraction.
- II) Explain secondary rules.
- III) List out the types of constraints.

Examination and Evaluation Pattern for Undergraduate courses (Autonomous)

- IV) Explain any three aggregate functions with the help of a proper example.
- V) Explain with the help of example Boyce–Codd Normal Form.
- VI) Differentiate between physical data independence and logical data independence.

SECTION: D

Q5) Long Answer Questions (2/4)

10

- I) Draw the structure of DBMS and explain Disk storage.
- II) Consider a relation $R=(ABCDEF)$ and a set of functional dependencies $F=\{A \rightarrow B, B \rightarrow D, C \rightarrow D, E \rightarrow F\}$ Find candidate keys.
- III) Draw E-R Diagram for Library Management System.
- IV) Explain the following SQL Commands with proper syntax ,example and use -
 - (i) Alter
 - (ii) Drop
 - (iii) Update