II B.Tech. II Semester Supplementary Examinations Nov/Dec 2019
Database Management Systems
(Common to CSE & IT)

Max. Marks: 70   Time: 3 Hours
Answer *all five* units by choosing one question from each unit (5 x 14 = 70 Marks)
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UNIT–I

1. a) Explain the advantages of using a query language instead of custom programs to process data.
    b) What is data independence and how does a DBMS support it?

OR

2. a) What are the different types of user interface designed for database users? Discuss the main activities of each.
    b) Briefly discuss about architecture of database system with diagram.

UNIT–II

3. a) Explain the distinctions among the terms primary key, candidate key, and superkey
    b) Name the main steps in database design. What is the goal of each step? In which step is the E-R model mainly used?

OR

4. a) Explain the following terms: i) Relationship set ii) Composite attribute iii) Multivalued attribute iv) Derived attribute
    b) Construct an E-R diagram for a hospital with a set of patients and a set of medical doctors. Associate with each patient a log of the various tests and examinations conducted.

UNIT–III

5. a) What are views? Discuss the problems encountered in modifying database through views.
    b) Explain the differences between Triggers and constraints

OR

6.   Consider the following schema:

        Suppliers (sid: integer, sname: string, address: string)

        Parts(pid: integer, pname: string, color: string)

        Catalog(sid: integer, pid: integer, cost: real) The Catalog relation lists the prices charged for parts by Suppliers.

        Write the following queries in SQL:

        i.   For each part, find the sname of the supplier who charges the most for that part.
        ii. Find the sids of suppliers who supply only red parts.
        iii. Find the sids of suppliers who supply a red part and a green part.

UNIT–IV

7. a) Compare 3NF and BCNF with a suitable example
    b) What is dependency preserving for decomposition? Explain why it is important

OR

8. a) Explain why 4NF is more desirable than BCNF
    b) What is Normalization? Explain briefly 1NF, 2NF & 3NF with suitable examples.

UNIT–V

9. a) How is data organized in a tree-based index? When would you use a tree?
    b) Why are tree-structured indexes good for searches?

OR

10. a) How does a B+ tree index handle search, insert and delete?
    b) With diagram, explain tree structure index

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Code: 4G144

II B.Tech. II Semester Supplementary Examinations Nov/Dec 2019

Object Oriented Programming Through JAVA

(Common to CSE & IT)

Max. Marks: 70   Time: 3 Hours

Answer *all five* units by choosing one question from each unit (5 x 14 = 70 Marks)

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UNIT–I

1. a) List and describe Java Buzzwords.

    b) What is an array? Write a Java program to print upper triangle values of a given two dimensional array.

OR

2. a) Define a class? What is the general form of a class? How objects are declared explain with an example?

    b) Define Constructor. With suitable example explain constructor over loading.

UNIT–II

3. a) Define Inheritance. Explain how one class inherit another class with an example.

    b) Define package. Write a simple java program to implement package.

OR

4. a) When a class called as abstract classes? Explain,

    b) Is interfaces can be extended? Explain with an example.

UNIT–III

5. a) List and explain the exception handling keywords.

    b) Describe the main thread in java.

OR

6. a) Describe the nested try statements.

    b) Differences between Multithreading and Multitasking.

UNIT–IV

7. a) List AWT controls. Explain Label control.

    b) How applets are differed with applications.

OR

8. a) Briefly explain ArrayList Class.

    b) Write a simple program to illustrate GridLayout.

UNIT–V

9. a) Define an Event. List and briefly describe the event listener interfaces.

    b) What are the limitations of AWT?

OR

10. a) Implement simple client server using TCP/IP Sockets.

    b) What is the need of Adapter class?

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