Q.P. Code No. 41432

Fourth Semester B.Sc., Degree Examinations

May /June 2026

(SEP scheme)

Computer Science

SSD0320 : Database Management System

Time: 3 hrs.] *[Max.Marks:80*

Instruction to the Candidates :

1. *The student should legibly write Section number along with question numbers within the margin only.*
2. *The answers without Section number and question numbers will not be valued.*
3. *Do not write anything (except register number) on the question paper.*

SECTION – A

I. Answer all the following questions. **(2X10=20)**

1.

a) Define entity and entity set.

b) What is database schema and instance of database.

c) List and explain any two characteristics of database.

d) Explain Cartesian product in relational algebra. Give example.

e) What is the use of NULL value ? Explain with an example.

f) Explain the below error message with example "value too large for column" "SYSTEM", "EMPLOYEE", "END" .

g) Give an example for 2NF relation.

h) Explain any two features of PL/SQL.

i) Write the syntax of PL/SQL code block.

j) With syntax, explain IF statement in PL/SQL.

SECTION – B

II. Answer any SIX Questions of the following. **(5X6=30)**

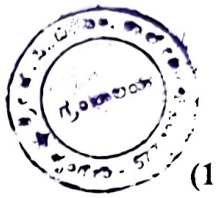
2. What is database management system ? Explain different types of Database languages with example for each.

3. Explain different types of attributes in ER – modeling. Give example to each.

4. Define 'Key' in a Relation. Explain different types of key constraints with example.

Contd...2

5. Explain various join operations in relational algebra.
6. What is functional dependency ? Explain the types of functional dependency with example.
7. Write a note on select command with GROUPBY clause.
8. With its syntax explain CASE statement in PL/SQL. Give example.
9. What is a constant ? Write PL/SQL program to find diameter, circumference and area of a circle using constant value .



SECTION – C

III. Answer any THREE of the following questions. **(10X3=30)**

10. a) Explain database architecture with neat labeled diagram.

    b) Write the ER – diagram for library management system database with entities : Books, publisher, member and build relationship with constraint's. (5+5)

11. Explain the following operations in relational algebra. Give example.

    i) σ ii) π iii) ⊔ iv) ⊓ (10)

12. a) Explain 3NF and BCNF with example.

    b) What is a view ? Explain how to create a view with syntax and example. (6+4)

13. a) Explain user – defined exception handling in PL/SQL with its syntax. Write a PL/SQL program to RAISE an exception.

    b) Explain FOR loop in PL/SQL with its syntax. Write a PL/SQL program to display 10 natural numbers in descending order. (5+5)

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