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First Year (B.Sc.Computer Science)
COM11405 : Database Management Systems
(Semester I)

Program: B.Sc.Computer Science Code (BScComp05)

Program Specific: Computer Science

Course Type: VSC

Paper: III

Credits: 2

Time: 2 Hours

Max. Marks: 30

SET: A

Instructions to the candidate:

- 1) All questions are compulsory.
- 2) Figures to the right indicate full marks.
- 3) Draw a well labeled diagram wherever necessary.

SECTION: A

Q1) Answer the following:

[5 X 1= 5]

1. Define Data.
2. Define a strong entity.
3. Mention how to create a table?
4. List out the DDL commands.
5. Define 2 NF.

SECTION: B

Q2) Answer ANY FIVE of the following:

[5 X 2 =10]

1. State Group by clause with suitable example.
2. Illustrate multivalued attribute with suitable example.
3. Define the view? Explain with syntax.
4. Consider a relation Doctor(d_no,d_name,d_city) and write query in SQL:
 - (a) List out the names of doctors whose name ends with 'i'.
 - (b) Display information of a doctor who lives in the city 'Pune'.
5. Draw a suitable diagram of levels of data abstraction..
6. Define following terms with the help of suitable example-
 - a.Binary Relationship
 - b.Ternary Relationship
7. Explain any 2 aggregate functions with syntax and suitable examples.

SECTION: C

Q3) Answer ANY TWO of the following:

[2 X 5 = 10]

1. Explain Network data model with suitable example.
2. Consider a relation $R=(ABCDE)$ and set of functional dependencies $F=\{A \rightarrow C, E \rightarrow D, B \rightarrow C\}$
Find candidate keys.
3. Draw E-R Diagram for College Management System.
4. Differentiate between Physical and Logical Data Independence.

SECTION: D

Q4) Answer ANY ONE of the following:

[5 X 1 = 5]

1. Explain inner join and left outer join with proper syntax and suitable example.
2. Explain the following SQL Commands with proper syntax, suitable example and use :
(i) Update (ii) Drop (iii) Alter
