

B.Sc.- II (CBCS Pattern) Sem-III  
**USCST05 - Computer Science Paper-I :**  
**Database Management & System Analysis**

P. Pages : 1

Time : Three Hours



GUG/W/22/11602

Max. Marks : 50

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- Notes : 1. All questions are compulsory and carry equal marks.  
2. Draw neat and labelled diagrams wherever necessary.  
3. Avoid vague answers and write answers relevant and specific to questions only.

**Either:**

1. a) What is data model? Explain any one data model in detail. 5  
b) Explain advantages of DBMS. 5

**OR**

- c) Explain three tier architectures in detail. 5  
d) What are the basic terminologies used in DBMS? Explain any two in detail. 5

**Either:**

2. a) Explain the concept of relational database structure. 5  
b) What is normal form? Explain 2NF in detail. 5

**OR**

- c) Explain CODD's rules in detail. 5  
d) Explain 3NF with suitable example. 5

**Either:**

3. a) Explain PARIS model in detail. 5  
b) Write a short note on: 5  
i) Decision tree ii) Decision table

**OR**

- c) Define a system. Explain the component of system. 5  
d) What are the reasons of using CASE tools? 5

**Either:**

4. a) Discuss about maintenance review in system design. 5  
b) Write a note on: 5  
i) Quality assurance ii) Privacy

**OR**

- c) List the various level of testing. Explain any one level of testing. 5  
d) Explain the objectives and methods of output design. 5

5. Attempt all the questions.
- a) Write a short note on data processing. 2½  
b) Write a note on: 2½  
i) Set intersection ( $\cap$ ) ii) Union Operator ( $\cup$ )  
c) Explain data flow diagram in short. 2½  
d) Write a short note on form design. 2½

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