

**FACULTY OF SCIENCE**

**B.Sc. IV-Semester (CBCS) Examination, May / June 2018**

**Subject: Computer applications**

120916467-014

**Paper – IV**

**Database Management Systems**

**Max.Marks: 80**

**Time: 3 Hours**

**PART – A (5x4 = 20 Marks)**

**[Short Answer Type]**

**Note: Answer any five of the following questions.**

1. Explain about three level architecture.
2. Explain about integrity constraints.
3. Explain different aggregate functions supported by SQL.
4. Explain about scalar data types.
5. What is an attribute? Explain different types of attributes.
6. Explain about functional dependency.
7. Explain about properties of transaction.
8. Explain about Two Phase Locking (2PL).

**PART – B (4x15 = 60 Marks)**

**[Essay Answer Type]**

**Note: Answer all questions from the following.**

- 9 a) Explain the advantages and disadvantages of DBMS.  
**OR**  
b) Explain the functions of DBMS.
- 10 a) Explain about functions and procedures in advanced-SQL.  
**OR**  
b) Explain about discretionary access control mechanism.
- 11 a) Explain about specialization, generalization and aggregation with suitable examples.  
**OR**  
b) Define Normalization. Explain about 3NF and BCNF with examples.
- 12 a) Explain about Deadlocks in detail.  
**OR**  
b) Explain different recovery techniques.