

Roll No.

97671

**B.C.A. 3rd Semester (New)
Examination–November, 2014**

INTRODUCTION TO DATA BASE SYSTEM

Paper : BCA-203

Time : 3 hours

Max. Marks : 80

Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard will be entertained after the examination.

Note : Question No. 1 is **compulsory**. Attempt **Four** more questions selecting **One** questions from each unit.

1. Answer the following questions briefly :

- (a) Discuss two advantages of Physical Data Independence.
- (b) List two major advantages of conceptual modeling.
- (c) Explain BCNF with an example.

- (d) Define data models.
- (e) Explain uses of abstraction.
- (f) Define query optimization
- (g) Write the uses of entity sets.
- (h) Explain data integration. 8×2=16

UNIT - I

- 2. (a) What is database ? How is it useful and used ? Discuss with examples. 8
- (b) Discuss limitations of file system with examples. 8
- 3. Explain the following briefly with suitable examples :
 - (i) DBMS functions 4
 - (ii) DBMS languages 4
 - (iii) Database administrator 4
 - (iv) Differences between data and information 4

UNIT - II

4. (a) What is client server architecture ? How is it useful and used in DBMS ? Explain with an example. 8
- (b) Discuss architecture of DBMS with an example. 8
5. Describe the following with examples :
- (i) Schemas and its advantages 4
- (ii) Physical data models 4
- (iii) Data independence 4
- (iv) Mappings and instances 4

UNIT - III

6. (a) What is Network data model ? How is it used and useful ? Explain with examples. 8
- (b) Discuss Database relations and their properties with examples. 8

7. Explain the following with examples :

(i) Differentiate between E-R model and ER diagram. 8

(ii) Advantages of relational model. 8

UNIT - IV

8. (a) What is query processing ? How is it used and useful ? Discuss its strategies with examples. 8

(b) Explain differences between 4NF and 5NF with an example. 8

9. Explain the following briefly with examples :

(i) Database concurrency and its applications 4

(ii) Data types in SQL 4

(iii) Functional dependencies 4

(iv) Advantages of relational algebra 4