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 4 NF 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
