II Semester B.C.A. Degree Examination, May/June 2014
(Y2K8 Scheme) (2008-09 and Onwards)
(F + R – 70 – 2011-12 and Onwards/R – 60 – Prior to 11-12)
COMPUTER SCIENCE
BCA 205 : Database Management Systems

Time : 3 Hours   Max. Marks : 60/70

Instructions : 1) Section **A, B, C,** is common to **all,** Section **D** is applicable to the students who have taken admission from **2011-12** onwards.

2) **70** marks for students from **2011-12** onwards
60 marks for **repeater** students prior to **2011-12.**

SECTION – A

I. Answer **any ten** questions. **Each** question carries **one** mark.   (10×1=10)

1) Define Database.

2) What is Entity ? Give example.

3) What is network data model ?

4) Define schema.

5) What is an attribute ? Give an example.

6) What is primary key ?

7) What is Hashing ?

8) What is SQL ?

9) What is relational algebra ?

10) What is DML ? Give example.

11) What is a cursor ?

12) Define transaction.

SECTION – B

II. Answer **any five** questions. **Each** question carries **three** marks :   (5×3=15)

13) Explain the properties of database.

14) Briefly explain database languages.

15) Define the terms :
    i) Track
    ii) Cylinder
    iii) Sector.

16) Explain Boyce Codd Normal form with an example.

17) What is relational schema and relational instance ? Give one example.

18) What is view and its advantage ?

19) What is trigger ?

20) Discuss the types of locks in brief.

SECTION – C

III. Answer **any five** questions. **Each** question carries **seven** marks.   (5×7=35)

21) Explain client server architecture with neat diagram.

22) Explain the following terms with at least one example.
    a) Super key
    b) Foreign key
    c) Weak entity.

23) Explain memory hierarchies and storage devices.

24) Define functional dependency. What are its properties ?

25) Explain selection and projection operation in relational algebra with an example.
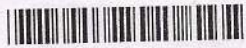
26) Explain the following SQL commands with examples.

   i) Create   ii) Alter

   iii) Select   iv) Truncate.

27) a) Explain PL/SQL control statements with an example.

   b) Write PL/SQL code to find the factorial of a given number.

28) Explain the concepts of commit and roll back.

SECTION – D

Note : Section **D** should be answered by students of **2011** batch onwards only.

IV. Answer **any one** question. **Each** question carries **ten** marks :   **(1×10=10)**

   29) a) Explain the responsibilities of DBA.

      b) Write any five applications of DBMS.   **(5+5)**

   30) a) Describe the different notations used in ER diagram.

      b) Construct an ER-diagram for BCA department database.   **(5+5)**

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