SA – 688

IV Semester B.A./B.Sc. Examination, April/May 2015
(Semester Scheme)
(Fresh) (2014-15 Only)
COMPUTER SCIENCE – IV
Data Base Management Systems and Software Engineering

Time : 3 Hours   Max. Marks : 70(F)

Instruction : *Answer all Sections.*

SECTION – A

I. Answer **any 10** questions. **Each** question carries **2** marks.   **(10×2=20)**

1) Define database and DBMS.

2) Write the syntax for INSERT and UPDATE commands in SQL.

3) Define relationship. Mention the different types of relationships.

4) Define primary key and foreign key.

5) What is meant by referential integrity ?

6) Define the different types of data independence.

7) Define software and software engineering.

8) What is meant by software myths ?

9) What is a agility ?

10) Define software process model.

11) Define Software Quality Assurance.

12) What is meant by unit testing ?

SECTION – B

II. Answer the following questions. **Each** question carries **10** marks.   **(5×10=50)**

13) a) Define normalization. Explain any two Normalization with examples.

                                                           (1+3+3+3)

                OR

    b) Explain any three relational Algebra operations with an example.   **10**

14) a) Describe the following :

    i) Write a note on DML with example.   5

    ii) Three schema Architecture of DBMS with diagram.   5

<div align="center">OR</div>

  b) i) What is an attribute ? Explain the different types of attributes with examples.   5

    ii) Explain Relational Data model.   5

15) a) i) Explain various integrity constraints.   5

    ii) Explain the SQL commands for natural join and inner join with suitable example.   5

<div align="center">OR</div>

  b) Write the SQL commands for the following :

Department (deptid, dname, location)

Student (snum, sname, deptid, slevel, age)

Faculty (fid, fname, deptid)

Class (cname, time, roomno, fid)

Enrolled (snum, cname)

    i) Create the above tables by specifying primary and foreign keys.   5

    ii) Get the names of faculty teaching a class in room no. 106.   1

    iii) Get the number of students in the department named 'C.Sc'.   1

    iv) Get the department names and number of students majoring in that department sorted in the decreasing order of the number of students.   1

    v) Create an index on the name of students in descending order.   1

    vi) Create view as list of students enrolled in course taught by faculty named 'Narayan'.   1