M-3720

First Year B. C. A. (Sem. II) Examination

September/October – 2015

205 : Database Management System

Time : 3 Hours] [Total Marks : 70

Instructions :

(1)

નીચે દર્શાવેલ ☛ નિશાનીવાળી વિગતો ઉત્તરવહી પર અવશ્ય લખવી.
Fillup strictly the details of ☛ signs on your answer book.

Name of the Examination :
☛ FIRST YEAR B. C. A. (SEM. II)

Name of the Subject :
☛ 205 : DATABASE MANAGEMENT SYSTEM

☛ Subject Code No. : 3 7 2 0 ☛ Section No. (1, 2,.....) : Nil

Seat No. :

Student's Signature

(2) Figures on the right indicate marks.

(3) Take assumption whenever necessary.

1 Answer the following: **(any seven)** 14

(i) Define Instance and Schemas.

(ii) Explain Entity and Entity Sets.

(iii) List DCL & TCL Commands.

(iv) Define Data Dictionary.

(v) What is the difference between ALTER and UPDATE Command ?

(vi) List any 3 Armstrong's axioms.

(vii) What is Referential Integrity ? How can we achieve it ?

(viii) Define Data Redundancy.

2 Answer the following: **(any three)** 18

(i) Discuss the disadvantages of file processing system.

(ii) Write a note on Various Database Users.

(iii) Write a note on Data Independence.

(iv) Explain DDL & DML in detail.

3 Answer the following: **(any two)** 12

(i) Explain the concept of mapping cardinalities ? Explain each with an example.

(ii) What is decomposition ? Explain decomposition which is lossless with an example.

(iii) What is the purpose of Normalization ? Explain BCNF in detail.

4 Answer the following: **(any three)** 12

(i) What is functional dependency ? Explain Full and Partial functional dependency.

(ii) Explain the concept of Generalization and Specialization with an example.

(iii) Construct an E-R Diagram on Library Management System.

(iv) Write a note on Database Abstraction Levels.

5 (a) Write Queries for creating following tables with appropriate constraints: 4

Student_Master (Rno, Name, Gender, DOB, Address, City)

Stud_Assignment (Rno, Subject, Month, Total_Assignments_Submitted)

Stud_Attendance (Rno, Subject, Month, Total_Lectures_Attended

(b) Solve the following Queries : 10

(i) Display Total no. of Girls and Boys.

(ii) Display students who have submitted at least 5 assignments in any subject.

(iii) Display students who have not attended any lecture of 'OS' in January month.

(iv) Display total assignments of students of 'DBMS' subject for the month of february.

(v) Display assignment and attendance details of students in 'DBMS' subject.
