Term End Examination – December, 2017
Diploma in Computer Applications
DCA-05: DATABASE SYSTEM (2016 Syllabus)

Time - 3 Hours   **Full Mark - 100**

*Answer any **four** questions from Group - 'A', any **two** questions from*
*Group - 'B' and any **three** questions from Group - 'C'*

Group 'A'   Marks: 5 × 4= 20

*(Answer any **four** questions each within 100 words)*

Q. No. 1
   a) Define a database system? Write its characteristics.
   b) Explain any two DML commands with appropriate syntax.
   c) What do you mean by an attribute and a tuple in a relation?
   d) Define a data model. What are different types of data models?
   e) What are extensions and intentions in databases?
   f) What are the conditions for insertion of records in to a relation or table?
   g) What are the uses of "Primary Key' and 'Foreign Key' in relations?

Group 'B'   Marks: 10 × 2= 20

*(Answer any **two** questions each within 250 words)*

Q. No. 2
   a)   What are the benefits of using a database system?
   b)   What do you mean by Physical and Logical Data Independence?
   c)   Discuss different types of symbols used in ER diagrams.
   d)   Consider the following relational schemas:
         EMPLOYEE (ENAME, ESTREET, ECITY)
         WORKS (ENAME, COMPANYNAME, SALARY)
         COMPANY (COMPANY_NAME, ECITY)
         Specify the table definitions in SQL.
   e)   Explain the function of each of the clauses used in SELECT statements.

Group 'C'   Mark: 20 × 3= 60

*(Answer any **three** questions each within 500 words)*

Q.No.3. Describe the advantages of using of DBMS over File Oriented Systems. Does it have any disadvantage?

4. What is a Relational Data Model? Write its advantages and disadvantages.

5. Discuss the roles and responsibilities of a Database Administrator (DBA).

6. Explain the basic features, advantages, disadvantages of relational databases.

7. What is Normalization? Explain 2NF and 3NF with example.

8. What is a Key? What are different types of Keys in relational databases?