

END TERM EXAMINATION

SECOND SEMESTER [BCA] JULY 2023

Paper Code: BCA-108

Subject: Database Management System

Time: 3 Hours

Maximum Marks: 75

Note: Attempt five questions in all including Q.No. 1 which is compulsory. Select one question from each unit.

- Q1. Answer the following (**any five**) (5x5=25)
- (a) Explain advantage of database management system over file processing system.
 - (b) Explain the role of E-R model in database design.
 - (c) Differentiate between serializable and non-serializable transactions.
 - (d) What problems are encountered if data is not stored in normalized table?
 - (e) Explain DDL and DML. Give three commands each for DDL and DML.
 - (f) What is data independence? What are two forms of data independence? Explain with the help of an example.
 - (g) What is the difference between strong and weak entity sets? Why sometimes weak entity sets are needed in database design.

UNIT-I

- Q2. a) Describe the three - schema architecture. Why do we need mappings between schema levels? How does different schema definition language support this architecture? (6)
- b) A database is being constructed to keep track of the teams and games of a sports league. A team has a number of players, not all of whom participate in each game. It is desired to keep track of the players participating in each game for each team, the positions they played in that game, and the result of the game. Design an ER diagram for this application, stating any assumptions you make. Choose your favourite sport (e.g., soccer, baseball, football) (6.5)
- Q3. a) Explain different types of keys with example. Differentiate between Primary key, candidate key and super key. (6.5)
- b) Illustrate the use of SUM (), AVG (), COUNT (), MIN (), MAX (). (6)

UNIT -II

- Q4. a) Consider the following relations
- Customer (CustId,CusName,Address,State)
 - Parts (PartNum,Description,Price)
 - Order(OrderNo,Name,Partnum,Qty,CustId)

P.T.O.

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P_{1/2}

