

67003-N

**M.C.A. 1st Semester (Bridge Course) (MCA 2 Year
Programme) (w.e.f. 2020-2021)**

Examination, November-2023

VISUAL BASIC & DATABASE SYSTEMS

Paper-20BCC11C3

Time allowed : 3 hours]

[Maximum marks : 80

***Note:** Attempt five questions in all. **Question No.1** is compulsory. In addition to compulsory question, attempt **four** more questions selecting **one** question from each unit.*

1. Compulsory Question:

- (a) What information is provided by the Project Explorer about the active VB project?
- (b) What do you understand by data type conversion?
- (c) Write down the structure for Nested if statement used in VB language.
- (d) How a form can be created at run time?
- (e) Discuss four, main types of actions performed by databases.
- (f) When a relation is said to be safe?
- (g) Why Armstrong's rule are considered as sound and complete rule?
- (h) What is the need of lock conversion?

Unit-I

2. (a) Differentiate between message box and input box. Discuss why Message Box holds an important position in VB programs? Also write down its syntax with an example.
- (b) Elaborate how Switch case statement is used for decision making more efficiently?
3. (a) Define List Box. Write a VB code snippet to add, remove and search an item in List Box.
- (b) Differentiate between Static and Dynamic arrays available in VB programming language. Illustrate with example.

Unit-II

4. (a) Differentiate between Modal and Modeless dialog box with their code snippet respectively.
- (b) How data controls are different from Data-bound controls? Explain.
5. (a) Write down the steps to create menu in menu editor and how submenu can be added within it?
- (b) How the data can be coordinated between MDI child forms? Explain.

Unit-III

6. (a) Why ER model is considered as conceptual model? Explain the structural constraints applied on ER model?
(b) Compare Equi, Natural and Theta join with example.
7. (a) How two-tier Client/Server architecture is different from three-tier Client/Server architecture? Why three-tier client/server architecture is more secure than two-tier Client/Server architecture?
(b) What is relational algebra? Discuss unary and binary operations of relational algebra with example.

Unit-IV

8. (a) What is functional dependency? Discuss different types and closure of a set in context of FD.
(b) Discuss optimistic concurrency control technique. Discuss its phases and how is minimum overhead reached?
9. (a) Why normalization is needed? Explain 3NF and BCNF with example.
(b) Discuss the measures of transaction equivalence and also differentiate between conflict equivalence and view equivalence.