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S. No. of Question Paper : 6870

Unique Paper Code : 234563

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Name of the Paper : CSCT-501 : Database and Visual Basic

Name of the Course : B.Sc. Programme Part III

Semester : V

Duration : 3 Hours

Maximum Marks : 75

(Write your Roll No. on the top immediately on receipt of this question paper.)

Part A is of 25 marks and is compulsory.

Attempt any *Five* questions from Part B.

Part A

1. (a) What is data ? What do you mean by information ? Explain with the help of suitable example. 3
- (b) Construct an E-R diagram for a hospital with set of patients and set of medical doctors. Associate with each patient a log of various tests and examination conducted. 5
- (c) What is the difference between physical data independence and logical data independence ? 3
- (d) Explain the components of Object Oriented Data Model in detail. 4

P.T.O.

2. (a) Write various properteis of VB forms. 3
- (b) Differentiate between Radio buttons and Check box in Visual Basic. 2
- (c) Fill in the blanks with appropriate words : 5
- (i) Clear property is available in control.
- (ii) Variables of different data types when combined as a single variable to hold several related informations is called a
- (iii) statement is used to read dimension in the array.
- (iv) Intermediate results can be viewed in the
- (v) OLE is used for

Part B

3. (a) Differentiate between DML and DDL with an example. 2
- (b) How can you create time events in VB ? 3
- (c) What is ADO Data Control ? Explain with an example. 2
- (d) Explain referential integrity. 1
- (e) Why is normalization required for any database ? 2

4. (a) Define the following terms : 5
- (i) RDBMS
 - (ii) Tuple and Relations
 - (iii) ER modeling.
- (b) Explain the following operators with example : 5
- (i) Between
 - (ii) IS NULL
 - (iii) LIKE
 - (iv) EXISTS
 - (v) IN.
5. (a) What is Scrollbar ? Explain the properties and methods. 4
- (b) What do you mean by data redundancy ? How can this be avoided ? 3
- (c) Explain the following terms : 3
- (i) Hierarchical Model
 - (ii) Network Model.
6. (a) How different users and procedures of data and information often reflect "Blind People and Elephant" analogy ? 3

- (b) What is the first step of Data Base ? 2
- (c) Why is Data Modeling an iterative programming process ? 2
- (d) Why are constraints so important ? 3
7. Explain the following terms with example : 10
- (i) Static
- (ii) Public
- (iii) Subroutine
- (iv) Class
- (v) MDI.
8. (a) Explain any *five* characteristics of DBMS. 5
- (b) Define 1NF and 2NF. With an example illustrate how an unnormalized table is converted to 2NF. 5
9. (a) Consider the following Employee database : 5
- Employee (Emp_name, Street, City)
- Work (Emp_name, company name_Salary)
- Company (Company_name, city)
- Manages (Emp_name, managers_name)

Write expression in SQL for the following queries :

- (i) Find all employees who live in the city ABC
- (ii) Find all employees whose salary is more than 10,000
- (iii) Find all employees in the database who do not work for ABC Corporation
- (iv) Find all employee names whose name of the manager is "RAM"
- (v) Find all company names located in city "ABC".

- (b) Build a form which accepts the following details :

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Employee ID, Employee Name, Basic, Grade, HRA, Allowance

The user is allowed to enter the following data :

Employee ID, Employee Name, Basic, Grade

HRA is 40% of Basic

Allowance is 20% of Basic

Develop an ActiveX DLL to calculate Net salary = Basic + HRA + Allowance.