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## PGDCA/II Sem.

Paper---CS-2.3

## OBJECT ORIENTED PROGRAMMING

(Admissions of 1998 and onwards)

Time: 3 Hours

Maximum Marks: 100

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

Attempt all questions.

All parts of a question must be answered together.

- (a) List the important features which makes Visual Basic an object oriented programming tool.
  - (b) Write a function that accepts a string m as input and returns the reverse of it. Don't use the library function for reversing the string.
  - (c) What is a Control Array? Explain with example the advantages of using the Control Array. 5
  - (d) Explain the three modes/views of Integrated Development Environment (IDE) of Visual Basic.

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 (a) Write an event procedure to count the number of positive numbers, negative numbers and zeroes in an array of 10 numbers that are given as input. Also, design the layout for an interactive front end with appropriate controls. Also mention the property settings of each control.

- (b) Create a form with a picture box. Find 3 interesting pictures. Use a timer control to cycle the pictures every 2 second. The form closes when the picture is clicked. (hint: Load Picture)
- (c) Write a VB Project to perform the operations among three numbers input through text boxes.
  Allow the user to select one of the keywords from a list box containing TOTAL, AVG and MULTIPLY option. The result of the operations must be displayed on a level.
- 3. (a) Write appropriate statements to do the following:  $2 \times 4 = 8$ 
  - (i) Display a form on click of a command button.
  - (ii) Take the input from the user at run time.
  - (iii) Loading the items in a list box.
  - (iv) Declaring the type of a variable.
  - (b) Differentiate between:  $3 \times 4 = 12$ 
    - (i) Intrinsic data control and ADO data control for database accessing.
    - (ii) Picture box and Image box.
    - (iii) Sub Procedure and Sub Function
    - (iv) Public and Private keywords.

- 4. (a) Give one example program to show the usage of MsgBox function. Can the same program be written using MsgBox statement?
  - (b) Write a program which uses the open commondialog box to display the name of the picture files (\*.bmp) present in a list box. The image selected by the user should be assigned to an image box kept on the form.
  - (c) Write a visual basic program that estimates the amount of taxes owed by the citizens according to the following tax rates:

0–9999	3%
10000-24999	6%
25000-49000	10%
50000 and above	15%

Provide a text box to get the salary from the user and a menu items. Calculate and Exit. Clicking calculate displays the calculated tax and net pay (salary-tax) on two labels.

- 5. (a) Write and explain the file handling statements for:  $1.5 \times 4 = 6$ 
  - (i) Getting a file handle.
  - (ii) Opening a sequential file in reading mode.

- (iii) Reading a line from the input file.
- (iv) Writing a line (read from input file) to output file.
- (b) Write a module for calculating a factorial of a given number and print the value of factorial of a number entered by the user at run time in a text box on a lable.
- (c) Write short notes on:

 $3 \times 3 = 9$ 

- (i) Frame Control
- (ii) Class Modules
- (iii) Data Grid.