RR-2007

Seat No.____

Second Year B. C. A. Examination

April / May - 2003

Object Oriented Methods & Programming (207) (Theory)

Time: [Total Marks: 50 Hours **Instructions**: (1) Write **new** question on new page. (2) Draw **diagrams** wherever necessary. Do as directed: (any ten) 10 1 What is insertion operator? (ii) What is bottom-up approach of programming? (iii) Explain reference variable. (iv) What is static data member? (v) Explain private and protected access modifiers (vi) Explain this pointer (vii) What is difference between following two statements? (a) $Cin \gg C$: (b) Cin.get (c); (viii) Friend function cannot be used to overload operators. (True/False) (ix) Defining a derived class requires some changes in base class. (True/False) (x) We can pass arguments to the destructor. (True/False) (xi) A constructor is executed automatically when an object _____ function return true when input or (xii) output operation is fail. 2 Answer the following : (any **five**) 10 When do you make a virtual function pure? (i) (ii) Discuss the syntax of set() function. (iii) When do you make a class abstract? (iv) How many arguments are required in the definition of an overloaded binary operator? (v) Explain constructor overloading with example. (vi) Explain Memory allocation for objects with diagram. (vii) Explain inline function with example. RR-2007] 1 [Contd...

3 (a) Write short notes: (any **two**)

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- (i) Friend function
- (ii) Type conversion
- (iii) Function prototyping.
- (b) Differentiate the following: (any two)

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- (i) Call by reference and Call by value
- (ii) Protected visibility mode and Public visibility mode.
- (iii) Compile time binding and Runtime binding.
- **4** Attempt any **two**:

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(i) A file contains a list of telephone numbers in the following form :

Tina 12345 Ena 67891 Deeka 23456

The names contain only one word and the names and telephone numbers are separated by white spaces. Write a program to read the file and output the list in two columns. The names should be left-justified and the numbers right-justified.

- (ii) Define class time that has hours and minutes as data members. Overload + Operation that gives sum of two time objects and > = operator to compare two time objects.
- (iii) Assume that a bank maintains two kinds of accounts for customers one called as savings account and the other as current account. Create a class account that store customer name, account number and type of account. From this derive the classes cur-account and sar-account to make them more specific to their requirements. Include necessary member function in order to achieve the following tasks.
 - (a) Accept deposit from customer and update the balance.
 - (b) Display the balance.

[Contd.....

5 Do as directed : (any **five**) **10**

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- Features of OOP (Object Oriented Programming) (i)
- (ii) Explain stages of Object Modelling Technique
- (iii) Explain Link attributes with diagram
- (iv) Differentiate instance diagram and class diagram
- (v) Differentiate Aggregration and Generalization.
- (vi) Differentiate multiple inheritance and multilevel inheritance.
- (vii) Explain Role Names with diagram.

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