

18/10/13

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B.E / B.Tech (Full Time) DEGREE ARREAR EXAMINATIONS, NOV / DEC 2013

GEOINFORMATICS ENGINEERING BRANCH

FOURTH SEMESTER

GI 283 INFORMATICS – II / GI 9253 OBJECT ORIENTED PROGRAMMING

(Regulation 2004 / 2008)

Time: 3 Hours

Answer ALL Questions

Max. Marks 100

PART-A (10 x 2 = 20 Marks)

1. What are the main characteristics of procedure-oriented programming?
2. List a few areas of application of OOP technology?
3. What are 'Keywords' and 'Identifiers' in C++?
4. How Polymorphism is achieved at compile time?
5. How is a member function of a class defined?
6. What are the different visibility modes supported by C++?
7. List out any four rules that need to be kept in mind in deciding virtual functions?
8. "A static member function is similar to a friend function" – Comment.
9. State the use of ADO Object model.
10. What is GIS customization?

PART – B (5 x 16 = 80 marks)

11. (i) Describe about ADO Data Control and Data Bound Control in accessing databases. (8)
(ii) Discuss about ODBC using DAO and Remote Data Objects. (8)
 12. a) (i) What do you mean by dynamic binding? How is it useful in OOP? (8)
a) (ii) Explain the idea of classes, data abstraction and encapsulation. (8)
- OR**
- b) (i) Describe inheritance as applied to object-oriented program. (8)
b) (ii) How are data and functions organized in an object-oriented program? (8)

13. a) (i) Write a C++ program to read a matrix of size $m \times n$ from the keyboard and display the same on the screen using functions. (8)
- a) (ii) What do you mean by overloading of a function and when do we use this concept? (8)

OR

- b) (i) Explain with examples on various data types available in C++. (8)
- b) (ii) Describe with examples for 'Call by value' and 'Call by Reference' in C++. (8)
14. a) (i) Explain the concept of 'operator overloading' in C++ with examples. (8)
- a) (ii) Explain what happens to the public, protected and private members of a base class when it is privately and publicly inherited by derived class? (8)

OR

- b) A book shop maintains the inventory of books that are being sold at the shop. The list includes details such as author, title, price, publisher and stock position. Whenever a customer wants a book, the sales person inputs the title and author and the system searches the list and displays whether it is available or not. If it is not, appropriate message is displayed. If it is, then the system displays book details and requests for the number of copies required. If the requested copies are available, the total cost of the requested copies is displayed; otherwise the message "Required copies not in stock" is displayed. (16)
- Design a system using a class called "books" with suitable member functions and constructors. Use "new" operator in constructors to allocate memory space required.
15. a) (i) Write a function in C++ to print the count of word "the" as an independent word in a text file STORY.TXT. (For example, if the content of the file STORY.TXT is "There was a monkey in the zoo. The monkey was very naughty", then the output of the program should be 2) (8)
- a) (ii) What are the steps involved using a file in a C++ program? (8)

OR

- b) (i) Describe the various file mode options available in C++. (10)
- b) (ii) Write a C++ program to perform the read and write file operations. (6)