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**B.E / B.Tech ( FULL TIME ) DEGREE END SEMESTER EXAMINATIONS, APRIL / MAY 2014**

**GEOINFORMATICS ENGINEERING BRANCH**

**FOURTH SEMESTER**

**GI8401 FUNDAMENTALS OF OBJECT ORIENTED PROGRAMMING**

(Regulation 2012)

Time: 3 Hours

Answer ALL Questions

Max. Marks 100

**PART-A (10 x 2 = 20 Marks)**

1. What are 'object identity' and 'object modeling'?
2. Mention the features of Object Oriented Programming languages?
3. What are the advantages of using 'functions'?
4. What are 'manipulators' and 'control statements'?
5. Define 'member functions'.
6. What are the different visibility modes supported by C++?
7. What is GIS customization using Java?
8. What is Java Applet?
9. Enumerate the features of Java Scripts.
10. List some programming language features of Python.

**PART – B ( 5 x 16 = 80 marks)**

11. (i) What is Ajax programming and discuss its various technologies? (8)
  - (ii) What factors do you take into consideration to decide if Perl is a suitable programming language for a situation? Discuss. (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) Explain the various types of Inheritance with an example. (8)
  - b) (ii) Write a C++ program to demonstrate Constructor and Destructor concepts. (8)

13. a) (i) Explain various data types available in C++ with example. (8)  
a) (ii) What do you mean by overloading of a function and when do we use this concept? (8)

OR

- b) (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)  
b) (ii) Describe with examples for 'Call by value' and 'Call by Reference' in C++. (8)
14. a) (i) Explain with an example on Object Oriented Analysis pertaining to OOP Concepts. (8)  
a) (ii) Discuss the concept of Polymorphism with an example. (8)

OR

- b) Discuss various concepts of Object Oriented Programming pertaining to Object Oriented Databases, Object Oriented Design, Object Oriented User interfaces and Object Oriented GIS. (16)
15. a) (i) What is JavaBeans and explain Event Delegation Model with neat diagram. (8)  
a) (ii) How Java is more portable than other languages? Discuss. (8)

OR

- b) (i) Discuss the Architecture of Java Servlet with neat diagram. (8)  
b) (ii) Compare Java and C++ with their pros and cons and show the basic structure of both the languages. (8)