

4E2016

Roll No. : _____

Total Printed Pages : **2****4E2016****B. Tech. (Sem. IV) (Reback) Examination, June/July - 2011****Information Technology****4IT3 Object Oriented Programming****(Common for Computer Engg. 4CP3 & Information Technology 4IT Branch)**Time : **3 Hours**][Total Marks : **80**[Min. Passing Marks : **24**

*Attempt any five questions. All questions carry equal marks.
(Schematic diagrams must be shown wherever necessary. Any data
you feel missing may suitably be assumed and stated clearly. Units
of quantities used/calculated must be stated clearly.)*

Use of following supporting material is permitted during examination.
(Mentioned in form No. 205)

1. _____ Nil _____

2. _____ Nil _____

- 1 (a) What is object oriented programming ? Explain the features of OOP.
(b) Write short notes on :
(i) Parallel Computing
(ii) Dynamic programming.

8+4×2=16**OR**

- 1 Write short notes on :
(i) Structured Programming
(ii) Event Driven Programming
(iii) Logic Programming
(iv) Aspect-Oriented Programming.

4×4=16

- 2 (a) What are Constructor and Destructor ? Explain various types of constructors. Is it mandatory to use constructor in a class ? Justify it.
(b) What is inheritance ? What are the different forms of Inheritance ? Give an example of each.

8+8=16**OR****4E2016]****1****[Contd...**

2 Distinguish between following terms :

- (a) Object and class
- (b) Data abstraction and data encapsulation
- (c) Inheritance and Polymorphism
- (d) Static binding and late binding.

4×4=16

3 (a) Describe operator overloading. List the operators which cannot be overloaded. Create a class to perform matrix addition using operator overloading.

- (b) What is friend function ? Write a program to swap private data of classes.

10+6=16

OR

3 (a) What is runtime polymorphism ? Explain how C++ handles runtime polymorphism ?

- (b) What is a class template ? Explain the syntax of a class template with suitable examples.
- (c) What are exceptions ? How does C++'s throwing and catching exceptions ?
- (d) What is Namespace ? How do we access the variables declared in a named namespace ? Give an example.

4×4=16

4 Define and explain following :

- (i) Java Byte code and JVM.
- (ii) Features of Java
- (iii) Nested and inner classes
- (iv) Use of final and super keywords.

4×4=16

OR

4 (a) What are the various access specifiers used in Java ? Explain their visibility.

- (b) What are abstract classes ? Write a program in Java having student as an abstract class and create many derived classes such as Engineering, Science, Medical, etc. from the student class. Create their objects and process them.

6+10=16

5 Define and explain following :

- (i) Interface vs abstract class
- (ii) String and string buffer class
- (iii) applet life cycle
- (iv) package

4×4=16

OR

5 (a) Write an applet to draw circle inside a square.

- (b) Write a program in Java to sort an array of strings.

8+8=16

