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**Question Paper Code : 57251**

**B.E./B.Tech. DEGREE EXAMINATION, MAY/JUNE 2016**

**Fourth Semester**

**Electrical and Electronic Engineering**

**CS 6456 – OBJECT ORIENTED PROGRAMMING**

**(Common to Electronics and Instrumentation Engineering, Instrumentation and Control Engineering)**

**(Regulations 2013)**

**Time : Three Hours**

**Maximum : 100 Marks**

**Answer ALL questions.**

**PART – A (10 × 2 = 20 Marks)**

1. What is object oriented programming ?
2. Define data abstraction.
3. Distinguish between class and object.
4. What is the use of destructor ?
5. What is generic programming ?
6. What is meant by exception ?
7. What is byte code ?
8. Java is robust. Comment.
9. Distinguish between interface and class.
10. What is multithreading ?

**PART - B (5 × 16 = 80 Marks)**

11. (a) (i) List out differences between procedure oriented programming and object oriented programming. (9 + 7)  
(ii) Explain about pointers with an example.

**OR**

- (b) (i) Explain the characteristics of OOPs.  
(ii) Write a C++ program to list out prime numbers between the given two limits. (8 + 8)

12. (a) (i) What are constructors ? Explain the concept of destructor with an example. (8 + 8)  
(ii) Explain array of objects with an example.

**OR**

- (b) (i) What is operator overloading ? List out the rules to overload a binary operator. (7 + 9)  
(ii) Write a C++ program to add two vectors using + operator overloading.

13. (a) (i) What is Inheritance ? List out the advantages of Inheritance. (7 + 9)  
(ii) Write a C++ program to implement multiple inheritance.

**OR**

- (b) (i) Discuss about exception and its advantages.  
(ii) Write a C++ program to generate an exception whenever user input is even number less than 100. (5 + 11)

14. (a) (i) List out the characteristics of JAVA. (8 + 8)  
(ii) Explain about dynamic method dispatch with an example.

**OR**

- (b) (i) Distinguish between instance methods and class methods with an example.  
(ii) Implement a class Student. A Student has a name and a total quiz score. Supply an appropriate constructor and methods getName( ), addQuiz(int score), getTotalScore( ) and getAverageScore( ). To Compute the latter, you also need to store the number of quizzes that the student took. (6 + 10)

15. (a) (i) How to define an interface ? Why do the members of interface are static and final ?  
(ii) Write a Java Program to implement nested packages. (7 + 9)

**OR**

- (b) (i) Distinguish between arrays and strings.  
(ii) Explain the methods available in the String Buffer class.  
(iii) Explain the use of command line arguments with an example. (3 + 5 + 8)