Reg. No. : | | | | | | | | | | | | |

Question Paper Code : 71681

B.E./B.Tech. DEGREE EXAMINATION, APRIL/MAY 2017.

Fourth Semester

Electrical and Electronics 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 object and class.
3. What is encapsulation?
4. Give an example for non parameterized constructor.
5. What are templates?
6. What are exceptions?
7. Which operators could be overloaded only by friend function?
8. What is byte code?
9. What is meant by platform independent language?
10. What is a package?

PART B — (5 × 13 = 65 marks)

11. (a) (i) Explain the characteristics of OOP. (6)

(ii) Compare and contrast OOP and procedure oriented programming. (7)

Or

(b) (i) Explain the various operations available in C++. (6)

(ii) Explain about dynamic allocation in C++. (7)

12. (a) Distinguish between

(i) Inheritance and containership (3)

(ii) Encapsulation and abstraction (3)

(iii) Write a C++ program to find whether the given string is palindrome or not. (7)

Or

(b) (i) List out the advantages of overloading. (3)

(ii) Write a C++ program to overload +operator for concatenating two strings. (10)

13. (a) (i) What is generic programming? (3)

(ii) Explain function template with an example. (10)

Or

(b) (i) List out the advantages of inheritance. (3)

(ii) Write a C++ program to implement multiple inheritance. (10)

14. (a) (i) Explain about Java features. (5)

(ii) Write a Java program to find the sum of the following series. (8)

1-2+3-4+.....+n.

Or

(b) (i) Discuss about benefits of abstract class. (3)

(ii) Explain dynamic method dispatch with an example. (10)

15. (a) (i) What are the major differences between an interface and a class? (3)

(ii) Make a class Student. The Student class has data members such as roll number, name, branch. Create a class called Exam that has data members roll number and six subject marks. Derive the result class from Student and Exam and it has its own data members such as total mark, and result. Write a Java program to model the relationships. (10)

Or

(b) (i) How do we add a class or interface to a package? (3)

(ii) Write a Java Program to implement nested packages. (10)

PART C — ($1 \times 15 = 15$ marks)

16. (a) Explain about thread synchronization with an example.

Or

(b) Write a Java program to create user defined exception.

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