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Question Paper Code : 31311

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2013.

Fifth Semester

Electrical and Electronics Engineering

CS 2311/CS 59/10133 EE 604/10133 CS 304 – OBJECT ORIENTED PROGRAMMING

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

(Regulation 2008/2010)

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 class and object.

4. What is the use operator overloading?

5. What is friend class?

6. What is bytecode?

7. Distinguish between overloading and overriding.

8. Define interface.

9. What are exceptions?

10. What is multithreading?

PART B — (5 × 16 = 80 marks)

11. (a) (i) List out the features of object oriented programming.

    (ii) Distinguish between abstraction and encapsulation.

    (iii) Explain Do - while with an example.   (5 + 3 + 8)

Or

(b) (i) What are constructors? Explain the concept of destructor with an example.

    (ii) Write a C++ program to list out prime numbers between the given two limits.   (8 + 8)

12. (a) (i) Explain friend function with an example.

(ii) Write a C++ program to concatenate two strings using + operator overloading.

Or

(b) (i) What is Inheritance? List out the advantages of Inheritance.

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

13. (a) (i) Explain IO streams used for file operation.

(ii) Write a C++ program to create a file with odd numbers and create another file with set-of even numbers and merge these two files and store it in another file. (8 + 8)

Or

(b) (i) Write a C++ program to generate user defined exception whenever user inputs odd numbers.

(ii) Explain function templates with an example. (9 + 7)

14. (a) (i) Explain about java features. (6)

(ii) Discuss about Java command line arguments. (4)

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

$1 - 2 + 3 - 4 + \cdots + n$ (6)

Or

(b) (i) Distinguish between

(1) Abstract class and class.

(2) Interface and class. (4)

(ii) Discuss about benefits of abstract class. (3)

(iii) Explain dynamic method dispatch with an example. (9)

15. (a) (i) How do we add a class or interface to a package ? (6)

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

Or

(b) (i) Explain about thread synchronization with an example. (8)

(ii) Write a Java program to create a user defined exception whenever user input the word "hello". (8)

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