Reg. No.:		4				

Question Paper Code: 91353

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2014.

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 — $(10 \times 2 = 20 \text{ marks})$

- 1. State how data encapsulation supports reusability.
- 2. What are abstract classes?
- 3. List the operators that cannot be overloaded.
- 4. Define the virtual functions.
- 5. What are streams?
- 6. What is the use of templates?
- 7. What is the significance of Java Virtual Machine?
- 8. How is garbage collection done in Java?
- 9. Give on a example on streams.
- 10. What are the two types of exceptions?

PART B — $(5 \times 16 = 80 \text{ marks})$

11. (a) Explain briefly about various object oriented programming concepts and show how C++ supports them.

Or

- (b) What are constructors and destructors? With suitable example explain various forms of constructors.
- 12. (a) With suitable example, explain how function overloading and operator overloading supports compile-time polymorphism.

Or

- (b) What is the significance of inheritance? Explain various types of inheritance with suitable examples.
- 13. (a) List of the C++ classes associated with streams and I/O operations. Write a simple C++ program to copy one file contents into another file.

Or

- (b) Create a user defined class called String and include methods that implement all the standard string operations.
- 14. (a) Write a simple java program to implement basic Calculator operations.

Or

- (b) How packages are used to resolve naming conflicts in Java? With an example show to add classes to packages and how to import packages in classes.
- 15. (a) What are interfaces? Explain with an example how multiple inheritance is implemented using interfaces.

Or

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(b) What is multithreading? Explain the two methods of implementing threads with an example.

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