B 2189

B.E./B.Tech. DEGREE EXAMINATION, MAY/JUNE 2007.

Fourth Semester

Electrical and Electronics Engineering

EE 237 — OBJECT ORIENTED PROGRAMMING

Time : Three hours
Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1.   What are objects? How are they created?

2.   What is data abstraction? Illustrate with an example.

3.   What is a reference variable? How it is advantageous?

4.   Write short notes on new and delete operators.

5.   What is a constructor? Illustrate with an example.

6.   Write short notes on dynamic initialization of objects.

7.   What is inheritance? Discuss its need.

8.   What is the difference between abstract base class and virtual base class?

9.   What is a template?

10. Write a note on pure virtual function.

PART B — (5 × 16 = 80 marks)

11. (a) (i)   Describe the major principles of object oriented programming with illustrations.   (10)

         (ii) Illustrate the concept of local variable declarations   (6)

Or

(b) (i) Compare procedure oriented programming and object oriented programming with suitable real world examples. (10)

      (ii) Write short notes on control structures in C++. (6)

12. (a) (i) Write a brief note on standard input/output streams in C++. (8)

      (ii) What is an inline function? What are the advantages of it? Write a program to illustrate the concept of inline functions. (8)

Or

(b) Develop program, which receives objects as arguments, and return objects as return values. Illustrate the above using complex number objects. (16)

13. (a) Define a class String that could work as a user defined data type. Include constructors that will create un-initialized string and initialize an object with string constant at the time of creation of an object of string class. Include a function that adds two strings to make a third string. Write a main ( ) test your class. (16)

Or

(b) What is the need of operator overloading? Write a C++ code to overload ++ operator. Test your code using main ( ) (16)

14. (a) Discuss about the various types of inheritances in C++ with neat sketches and examples. (16)

Or

(b) What is dynamic binding? Illustrate with an example how it is implemented by virtual functions. (16)

15. (a) Consider any one application of electrical engineering. Define suitable classes and identify objects. Write a program to implement the application. (16)

Or

(b) Explain the exception handling mechanism in c++. Write a program to illustrate divide by zero exception. (16)

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