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

Question Paper Code : 60377

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2016.

Third Semester

Computer Science and Engineering

CS 2203/CS 35/CS 1202/10144 CS 304/080230004 — OBJECT ORIENTED PROGRAMMING

(Common to Information Technology)

(Regulations 2008/2010)

(Also common to 10144 CS 304 — Object Oriented Programming for B.E. (Part-Time) First Semester – CSE – Regulations 2009)

Time : Three hours Maximum : 100 marks

Answer ALL questions.

PART A — ($10 \times 2 = 20$ marks)

1. What is the difference between the class and structure?

2. State the advantage of new and delete over malloc( ) and free( ) functions.

3. Define default constructor.

4. What is operator overloading?

5. List the advantages of generic progamming.

6. What is an exception? What is its use?

7. What is the use of abstract base class?

8. What is pure virtual function?

9. What is anonymous namespace? Give the syntax.

10. State any four advantage of standard template library in C++.

PART B — (5 × 16 = 80 marks)

11. (a) Explain the major principles of object oriented programming with illustrations and neat sketches. (16)

Or

(b) Illustrate the various function call mechanisms with suitable programming examples. (16)

12. (a) What are the various types of constructors? Illustrate with example programes. (16)

Or

(b) Define a class called Complex. Include functions for reading and displaying complex objects. Write a function to overload + operator to add two Complex objects. (16)

13. (a) What is a function template'? Write a template function to sort, arrays of float and int using bubble sort. (16)

Or

(b) Discuss in detail about exception handling constructs and write a program to illustrate divide by zero exception. (16)

14. (a) Explain the composite objects run time polymorphism.

Or

(b) Describe RTTI and templates with examples.

15. (a) Write a program in C++ to read an array of class object of student_info such as name, age, sex, height and weight from the keyboard and to store them on a specified file called 'stud-file' using read and write member functions, Again, the same file is opened for reading and displaying the contents. (16)

Or

(b) Write a program in C++ Using a random access file function to create a database of student's information such as name, roll no, sex, address and the program should have the following facilities:

(i) To display the entire database

(ii) To display only a particular record

(iii) To updata a record

(iv) To delete a record. (16)