CBCS Scheme

USN ☐☐☐☐☐☐☐☐☐☐

Second Semester MCA Degree Examination, Dec.2017/Jan. 2018
Object Oriented Programming using C++

Time: 3 hrs.   Max. Marks: 80

Note: Answer any FIVE full questions, choosing
ONE full question from each module.

Module-1

1   a. What is oop? Explain the principles of oop.   **(08 Marks)**
     b. What are inline functions? Discuss the advantages and disadvantages of inline functions.
                                                                           (04 Marks)
     c. Explain the general form of a class with an example.   **(04 Marks)**

OR

2   a. What are constructors and destructors? Explain different types of constructors with suitable
         examples.   **(08 Marks)**
     b. What are the static data members and static member functions? explain with examples
                                                                           (08 Marks)

Module-2

3   a. What are references? Explain the three ways of using the references with examples.
                                                                           (08 Marks)
     b. What is dynamic memory allocation? Explain how it is handled in C++, with an examples.
                                                                           (08 Marks)

OR

4   a. Describe function overloading with an example program.   **(08 Marks)**
     b. What are default function arguments? Explain the difference between default arguments and
         overloading.   **(08 Marks)**

Module-3

5   a. Describe operator overloading. Why it is necessary? Explain the restrictions of overloading
         an operator, with example.   **(08 Marks)**
     b. Write a C++ program to add two complex numbers by overloading + operator.   **(08 Marks)**

OR

6   a. Write a C++ perform which demonstrates how parameters are passed to a bare class
         constructor.   **(08 Marks)**
     b. What are virtual base classes? With an example demonstrate its use.   **(08 Marks)**

Module-4

7 a. What are virtual functions? With example demonstrate the use of virtual functions.
      (08 Marks)

   b. How do you explicitly overload a template function? Demonstrate with example program.
      (08 Marks)

OR

8 a. What is exception? How exceptions are handled in C++. **(08 Marks)**

   b. Write a C++ program that shows how to restrict the types of exceptions that can be thrown from a function. **(08 Marks)**

Module-5

9 a. Discuss the four built-in streams that are automatically opened when a C++ program begins execution. **(08 Marks)**

   b. Define the following :
      i) seekg() ii) seekp() iii) tellg() iv) tellp() v) precision() vi) width() vii) fill() vii) setf().
      (08 Marks)

OR

10 a. Write a program which demonstrates the use of read( ) and write( ) functions using files.
      (08 Marks)

   b. What is STL? List and explain the three types of container in STL. **(08 Marks)**

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