CBCS SCHEME

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16/17MCA22

Second Semester MCA Degree Examination, Dec.2018/Jan.2019
Object Oriented Programming Using C++

Time: 3 hrs. Max. Marks: 80

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

Module-1

1 a. What is OOP? Explain the various features of OOP. **(08 Marks)**

b. Explain the following :
   i) No default to int
   ii) Namespaces
   iii) General form of C++
   iv) Bool Data type. **(08 Marks)**

OR

2 a. What are friend functions and friend classes Give example. **(04 Marks)**

b. Differentiate structures and classes. **(04 Marks)**

c. Explain the following :
   i) Nested Classes
   ii) Empty classes
   iii) Local classes
   iv) Object assignment. **(08 Marks)**

Module-2

3 a. With an example, illustrate how to create, initialized and uninitialized array of objects using constructors. **(08 Marks)**

b. Explain:
   i) this pointer
   ii) Pointer to Derived types. **(08 Marks)**

OR

4 a. What is a reference? Explain the types of references. **(04 Marks)**

b. Define constructor and Destructor. Explain copy constructor with example. **(07 Marks)**

c. What is function overloading? Write overloaded functions for computing area of a triangle, circle and a rectangle. **(05 Marks)**

Module-3

5 a. What is operator overloading? How are they implemented in C++? Mention the rules for operator overloading. **(05 Marks)**

b. Explain a friend to overload ++ or – –. **(05 Marks)**

c. Describe the significance of overloading new and delete operator with suitable example. **(06 Marks)**

OR

6 a. What is inheritance? Discuss the various forms of inheritance? **(08 Marks)**

b. Write a program to illustrate inheriting from multiple base classes. **(04 Marks)**

c. What are virtual base classes? Write an example program to illustrate virtual base classes. **(04 Marks)**

Module-4

7 a. Distinguish between virtual and pure virtual function. **(06 Marks)**

b. What are generic functions? Write the restrictions on generic functions. **(06 Marks)**

c. Explain early and late binding with suitable example. **(04 Marks)**

OR

8 a. What is Generic sort? Write an example program to illustrate generic sort. **(04 Marks)**

b. Explain the following :

i) typename and export keywords

ii) Generic classes

iii) Terminate and unexpected Handlers

iv) uncaught_exception ( ) function **(08 Marks)**

c. What is exception handling? List the different exception handling options. **(04 Marks)**

Module-5

9 a. What are I/O streams in C++? Give the stream class hierarchy. **(06 Marks)**

b. Define manipulators. List the various predefined manipulators supported by C++ I/O streams. **(04 Marks)**

c. How are opening and closing of a file handled in C++? Distinguish between text and binary files. **(06 Marks)**

OR

10 a. Write a C++ program to illustrate the standard manipulators set isoflags ( ) and reset iosflags ( ). **(06 Marks)**

b. What is file mode? Describe the various file mode operations available in C++. **(04 Marks)**

c. Write a note on :

i) STL

ii) String classes. **(06 Marks)**

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