NEW

2018

BCA

4th Semester Examination

OOPS USING C++

PAPER—2201

Full Marks : 100

Time : 3 Hours

The figures in the right-hand margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

Illustrate the answers wherever necessary.

Answer Q. No. *1* and any *four* from the rest.

1. Answer any *five* questions : 5×2

(a) What is 'this' Pointer ?

(b) What is the use of 'mutable' keyword in C++

(c) What do you mean by dynamic memory allocation ?

(d) What is Virtual base class ?

(e) How C++ achives run time polymorphism ?

(f) State the necessity of copy constructor ?

(g) Is constructor a member function ?

2. (a) Explain in brief the concept of 'friend' in C++ ? Why is friend class used ? 5+3

(b) Why do we need static data members ? What is the syntax to define a static data member ? How can we make a constant member function to change the value of its class's data members ? 2+2+3

3. (a) What happens when the 'new' operator fails to allocate required amount of memory from the heap ? How do you change the default behaviour of 'new' operator when it fails to allocate required amount of memory from the heap ? 4+4

(b) What are destructors? When is the destructor called? Write a C++ program to demonstrate the calls to constructor and destructor. 2+2+3

4. (a) Differenciate between hierarchical inheritauce and hybrid inheritance with an example. 8

(b) Explain the data hiding in class. 4

(c) What is an abstract class? 3

5. (a) What is the difference between an interrupt and an exception. Why do we need to handle exception? Explain the functions of try, throw and catch. 3+2+6

(b) What is the use of 'append ()' member function of 'String' class? 4

6. (a) Explain interface classes with suitable examples. 10

(b) Explain exception handling with an example. 5

7. Write short notes (any *three*) : 3×5

(a) Encapsulation

(b) Arrow operator

(c) VTBL and VPTR

(d) Dynamic parameterized constructor.

[***Internal Assessment — 30 Marks***]

———