B.C.A. (Part – I) Semester–II (CBCS) Examination

2 BCA 3

OBJECT ORIENTED PROGRAMMING PARADIGMS

Time : Three Hours] [Maximum Marks : 80

Note :— (1) Question No. **1** is compulsory.

(2) Question No. **1** carries **20** marks and all other questions carry **12** marks each.

(3) Assume suitable data if necessary.

(4) Figures on the right hand side indicate full marks.

1. (A) Choose the correct alternative : 10×1=10

(i) Which feature of OOP indicates code reusability ?

(a) Abstraction (b) Polymorphism

(c) Inheritance (d) Encapsulation

(ii) How many types of access specifiers are provided in OOP (C++) ?

(a) 1 (b) 4

(c) 3 (d) 2

(iii) Which access type data gets derived as private member in derived class ?

(a) Private (b) Public

(c) Protected (d) Both (a) and (c)

(iv) The feature by which one object can interact with another object is :

(a) Data transfer (b) Data hiding

(c) Message Passing (d) Data Binding

(v) An inline function is expanded during _____.

(a) Run-time (b) Compile-time

(c) Never expanded (d) End of the program

(vi) What is meant by multiple inheritance ?

(a) Deriving a derived class from more than one base class

(b) Deriving a base class from derived class

(c) Deriving a derived class from base class

(d) None of these

(vii) How Exception handling is implemented in the C++ program ?

(a) Using Exception block (b) Using Exception keyword

(c) Using Error handling schedules (d) Using try-catch block

(viii) Assigning one or more function body to the same name is called :

(a) Function overloading (b) Function overriding

(c) Both (a) and (b) (d) None of these

(ix) Which class is used to design the base class ?

(a) derived class (b) abstract class

(c) base class (d) Both (a) and (c)

(x) While overloading binary operators using member function, it requires arguments :

(a) 2 (b) 0

(c) 1 (d) 3

(B) Fill in the Blanks : 5×1=5

(i) _____ are used to define generic classes in C++.

(ii) A class may have virtual destructor but it cannot have a virtual _____.

(iii) More than one derived class with only one base class is called _____ inheritance.

(iv) A class is a collection of_____.

(v) A function name is the same as the class name is called _____.

(C) Answer in **one** sentence : 5×1=5

(i) What is type casting ?

(ii) What is operator overloading ?

(iii) What is abstract class ?

(iv) What is dynamic binding ?

(v) What is function prototype ?

2. (A) Explain the basic concept of Object Oriented Programming in detail. 8

(B) Explain features of OOPs. 4

OR

3. (A) Explain the terms : 4

(a) Dynamic Binding

(b) Message passing

(B) What is class and objects ? Explain it with example. 8

4. (A) Explain the concept of Protected Access specifier with example. 8

(B) Explain the terms : 4

(a) Default constructor

(b) Parameterized constructor.

OR

5. (A) Explain Default Argument with example. 4

(B) What is inline function ? Explain it with program which demonstrates the use of inline function. 8

6. (A) Explain the types of inheritance with suitable example. 8

(B) Explain the concept of upcasting with suitable example. 4

OR

7. (A) Explain the concept of down casting with suitable example. 4

(B) What is type casting ? Explain with suitable example. 8

8. (A) Explain overloading of Unary operators. Also write a program to show the use of overloading unary operators. 8

(B) Describe the term Polymorphism. 4

OR

9. (A) Explain Function overriding. Also explain working of function overriding. 8

(B) Differentiate between Early Binding and Late Binding. 4

10. (A) What is the need of Abstract base class and how to implement with example ? Describe. 8

(B) Explain try _____ catch block with suitable example. 4

OR

11. (A) Describe static data member with declaration also write a program to demonstrate the static data members in C++. 8

(B) Explain Function Template with suitable example. 4