

B.C.A. DEGREE (C.B.C.S.S.) EXAMINATION, OCTOBER 2013**Third Semester**

Core Course—OBJECT ORIENTED PROGRAMMING AND C++

[Common for B.C.A. and B.Sc. Computer Applications (Three Main)]

Time : Three Hours

Maximum Weight : 25

Part A*Answer all questions.**Each bunch of four questions carries a weight of 1.*

- I. 1 Constructor is executed when :
- (a) Object goes out of scope. (b) Object is destroyed.
(c) Both (a) and (b). (d) None of the above.
- 2 A dynamic object is created at :
- (a) Run-time. (b) Compile time.
(c) When declared. (d) All the above.
- 3 The symbol - is used to represent :
- (a) Constructor. (b) New operator.
(c) A destructor. (d) Delete operator.
- 4 $a = 5 ; b = ++ a ;$ what will be the value of a and b ?
- (a) $a = 5 b = 5.$ (b) $a = 6 b = 6.$
(c) $a = 5 b = 6.$ (d) $a = 6 b = 5.$
- II. 5 A _____ is a function declared in a base class that has no definition relative to the base class.
- 6 An _____ is one that is not used to create objects.
- 7 A member declared as _____ is accessible by the member functions within its class and any class immediately derived from it.
- 8 The casting operator function must not have any _____.
- III. State whether the following statements are True or False :
- 9 An entire class can be made a friend of another class.
- 10 Destructors never take any argument.

Turn over

- 11 When using an overloaded binary operator, the left operand is implicitly passed to the member function.
- 12 A base class is never used to create objects.
- IV. 13 _____ means that the code associated with a given procedure call is not known until the time of the call at run-time.
- 14 Which of the following statement is incorrect ?
- Complex (float real = 0, float imag) ;
 - Complex (float real, float imag) ;
 - Complex (float a = 0) ;
 - Complex () ;
- 15 In _____, a class can inherit the attributes of two or more classes.
- 16 _____ is a way to add feature to existing class without rewriting.

(4 × 1 = 4)

Part B

*Answer any five of the following.
Each question carries a weight of 1.*

- 17 What is a stream ?
- 18 The following statements are available to read strings from the keyboard :
- cin >> SI ;
 - getline (cin, SI) ; where SI is a string object. Distinguish their behaviour.
- 19 What is the main advantage of passing arguments by reference ?
- 20 What is an operator function ? Describe the syntax of an operator function ?
- 21 What is a virtual base class ?
- 22 What is meant by change event ? Explain.
- 23 What are manipulators ? Name any two.
- 24 How is polymorphism achieved at (a) compile time ; and (b) run time ?

(5 × 1 = 5)

Part C (Short Essay)

*Answer any four of the following.
Each question carries a weight of 2.*

- 25 Briefly explain the characteristics of an object oriented language.
- 26 Write a program that reads several city names from the keyboard and displays only those names beginning with characters "B" or "C".

- 27 Describe briefly the features of I/O system supported by C++.
- 28 Compare private, public and protected data.
- 29 Explain the various types of constructors with syntax of each.
- 30 What are friend functions ? Explain.

(4 × 2 = 8)

Part D (Essay Type)

*Answer any two of the following.
Each question carries a weight of 4.*

- 31 Write notes on the following :
 - (a) Use case with examples.
 - (b) Object oriented methodology.
 - (c) State modelling.
 - (d) Links and associations.
- 32 Explain the following :—
 - (a) Static member functions.
 - (b) Multiple Inheritance.
 - (c) This pointer.
 - (d) Function prototyping.
- 33 Write a program in C++ to illustrate the use of hierarchical inheritance.

(2 × 4 = 8)