E 7947 (Pages : 3) Reg. No.....

Name.....

B.Sc. DEGREE (C.B.C.S.S.) EXAMINATION, SEPTEMBER 2019

Third Semester

Vocational Course—C++ PROGRAMMING

(For the Vocational Subject—Computer Applications of Model II B.Sc. Physics)

[Prior to 2013 Admissions]

Time : Three Hours Maximum Weight : 25

Part A (Objective Type Questions)

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

BUNCH I

Fill in the blanks :

1. ———— is a sequence objects having the same type.
2. The command used to access the 7^{th} element of an array named myarray is ————.
3. ———— and ———— are unary operators.
4. To be accessed from a member function of the derived class, data or functions in the base class must be public or ————.

BUNCH II

State whether true *or* false :

5. A two dimensional array is an array of arrays.
6. An overloaded operator always requires one less argument than its number of operands.
7. Adding a derived class to a base class requires fundamental changes to the base class.
8. If constructors are not specified for a derived class, objects of the derived class will use the constructors in the base class.

BUNCH III

Fill in the blanks :

9. ———— of an array is its address.
10. Unary operators require ———— number of arguments.
11. While defining an array, the constant or variable in the brackets is called ————.
12. A child class is said to be ———— from a base class.

Turn over

BUNCH IV

State whether true *or* false :

13. In a linked list, the links are stored in an array.

14. A pointer to a base class can point to objects of derived class.

15. A friend function can be used to mediate arguments between classes.

16. A copy constructor can be defined to copy only part of an object's data.

(4 × 1 = 4)

Part B (Short Answer Questions)

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

17. What happens when you refer to an array element outside the array bounds ?

18. What are multidimensional arrays ? How do you define them and access their elements ?

19. Assume that the class X does not use any overloaded operators. Give the statement that subtracts x_1 from x_2 and stores the result in x_3, x_1, x_2 and x_3 are objects of class X.

20. What is a conversion operator ? Where is it used ?

21. Inheritance permits code reusability. How ?

22. What are the steps to enable graphics mode in C++ ?

23. What are pointers ? What are its uses ?

24. What does the *this* pointer point to ?

(5 × 1 = 5)

Part C (Short Essay/Problems)

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

25. With an example, show how a two dimensional array can be initialized.

26. How do you define a string in C++ and read a string into it ?

27. Comment on the number of arguments required for an overloaded operator.

28. What is explicit conversion of types ? How is it done ?

29. What is inheritance ? What are its benefits ?

30. What is a pointer variable ? What does it hold ?

(4 × 2 = 8)

Part D (Essay Questions)

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

31. With a suitable example, show how arrays can be used as data items in classes.

32. What are the issues in converting a user-defined type to a basic type, a basic type to a user-defined type and a user-defined type to another user-defined type ?

33. What is constructor ? Explain different types of constructors with suitable example program.

(2 × 4 = 8)