B.Sc. DEGREE (C.B.C.S.S.) EXAMINATION, OCTOBER 2012

Third Semester

Vocational Course : CONCEPTS OF OBJECT ORIENTED PROGRAMMING

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

Time : Three Hours

Maximum Weight : 25

Part A (Objective Type Questions)

Answer all *questions.*

Weight 1 for each bunch.

BUNCH I

State whether True *or* False :

1. Building functions and data together is known as data hiding.

2. When a C++ program is executed, the function that appears first in the program is executed first.

3. A static class function can be invoked by simply using the name of the function alone.

4. A vector can store different types of objects.

BUNCH II

Fill in the blanks :

5. _____ are used to document a program.

6. The continue statement inside a loop causes the control to go to _____.

7. The _____ operator is used to specify a particular class.

8. _____ is a way to add features to existing classes without rewriting them.

BUNCH III

State whether True *or* False :

9. Data members in a class must be declared private.

10. Only when an argument has been initialized to zero value, it is called the default argument.

11. We can overload functions with differences only in their return type.

12. The expression for (; ;) is the same as a while loop with a text expression of true.

Turn over

BUNCH IV

Fill in the blanks :

13. _____ means the ability that one thing can take several distinct forms.

14. An array number is accessed using _____ number.

15. The _____ and _____ operators cannot be changed by over loading them.

16. The _____ operator is used to change constantness of objects.

$(4 \times 1 = 4)$

Part B (Short Answer Questions)
Answer any five questions.
Weight 1 each.

17. What is object oriented programming?

18. Give the major parts of a C++ program.

19. List the main features of OOP.

20. Bring out the structure of C++ program.

21. What are the advantages of function prototypes in C++?

22. When do we need to use default arguments in a function?

23. Why is an array is called a derived data type?

24. How objects are created? Explain.

$(5 \times 1 = 5)$

Part C (Short Essay/Problems)
Answer any four questions.
Weight 2 each.

25. Describe how data are shared by functions in a procedure oriented program.

26. Bring out the advantages of OOP.

27. Write a program to display the following output using a single cout statement :

Maths = 88 ; Physics = 91 ; Chemistry = 87.

28. What are the applications of void data type in C++?

29. How do structures in C and C++ differ?

30. What is a constructor? Is it mandatory to use constructors in a class?

$(4 \times 2 = 8)$

Part D (Essay Questions)

Answer any **two** *questions.*

Weight 4 each.

31. Write a program to read the values of m, n and p and display the values of a, where $a = \dfrac{m}{n-p}$. Test your program for the following values $m = 100, b = 30\ c = 15$.

32. Write a program to sum the sequence :

$$x - \frac{x^3}{3!} + \frac{x^5}{5!} - \frac{x^7}{7!} + \ldots \ldots \ldots \ldots \ldots$$

33. Create a class MAT of size $m \times n$. Define all possible matrix applications for MAT type objects.

$(2 \times 4 = 8)$