

B.Sc. DEGREE (C.B.C.S.S.) EXAMINATION, OCTOBER 2016**Third Semester****Vocational Course—CONCEPTS OF OBJECT-ORIENTED PROGRAMMING****(For the Vocational Subject : Computer Application of Model II Physics)****[2013 Admission onwards]****Time : Three Hours****Maximum : 60 Marks****Part A (Short Answer Questions)***Answer all questions briefly.**Each question carries 1 mark.*

Fill the blanks using appropriate words :

1. _____ is a data item whose data value can never change during the program run.
2. The continue statement inside a loop causes the control to go to _____.
3. Wrapping up of data of different types into a single unit is known as _____.
4. The _____ operator is used to specify a particular class.
5. If the return of a function is void then that means the function returns _____.
6. The structure definition starts with the keyword _____ and ends with a _____.
7. Members of a class accessible only to member functions of the class are known as _____ members.
8. Packing of data and functions into a single component is known as _____.

(8 × 1 = 8)**Part B (Brief Answer Questions)***Answer any six questions.**Each question carries 2 marks.*

9. What is a dot operator ? Give its application.
10. What are literals ? How many types of literals are available in C++ ?
11. Define a class. How does it accomplish data hiding ?
12. What kinds of things can become objects in OOP ?
13. Explain how reference variables are declared and used.
14. Explain the differences between structures and classes.
15. Write and explain the syntax of function.

Turn over

16. What is the effect of member functions in a class ? Explain.
17. Explain the relation of objects to classes.
18. What factors make two definitions with the same function name significantly different ?

(6 × 2 = 12)

Part C (Short Essays/Problems)

Answer any four questions.

Each question carries 4 marks.

19. Explain the various looping control statements in C++.
20. Explain, why member functions of a class are declared "public".
21. Define a function to interchange the values of two variables, using reference variables.
22. Explain how member functions are defined outside the body of class.
23. Define classes "Rectangle" and "Square", and using them compute their areas.
24. Write a function which calculates the product of two numbers. Call this function in a main program.

(4 × 4 = 16)

Part D (Long Essays)

Answer any two questions.

Each question carries 12 marks.

25. Write a C++ program to read an integer and :
 - (i) To find the number of digits in the number.
 - (ii) To print the number in reverse order.
 - (iii) To find the sum of individual digits in the number.
26. Write a program to generate series of prime numbers.
27. Using structure write a program to read the biodata of N students and then print the biodata of those students who scored first class. The biodata consists of Names, roll_no., branch, semester, subject marks and total marks.
28. Define a class to store the identification code of a product (character string) and its unit price. Provide member functions to read data and display the identification code of a product and its price.

(2 × 12 = 24)