



বিদ্যাসাগর বিশ্ববিদ্যালয়

VIDYASAGAR UNIVERSITY

B.Sc. Honours Examination 2021

(CBCS)

1st Semester

COMPUTER SCIENCE

PAPER—C1T & C1P

PROGRAMMING FUNDAMENTALS USING C/C++

Full Marks : 60

Time : 3 Hours

The figures in the right-hand margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

THEORY : C1T

Group - A

Answer any *three* questions.

3×12

1. Write down the difference between do-while and while loop. Describe the application of 'GOTO' and 'break' keyword. What is array? 4+3+3+2

2. Write down some features of Object Oriented Program. What is function overloading? Give some example of function overloading. Define Encapsulation. 4+3+3+2
3. What is operator? How many types of operators are available in C? Describe bitwise operator with example. 3+4+5
4. What is data type? Describe classification of data types. Write down the application of Array and function. 2+6+2+2
5. What is pointer? What do you mean by call by value and call by reference function. Discuss with suitable example. 2+3+3+4
6. What is friend function? What is constructor? Discussed with suitable example. Write down some applications area of Objected Oriented Programming Language (OOPS). 3+2+3+4

Group - B

Answer any *two* questions.

2×2

7. What are trigraph characters?
8. What is Keyword?
9. What is data abstraction?
10. What do you mean by polymorphism?

PRACTICAL : C1PAnswer any *one* question.

1×15

1. Write a C program to compute the sum of the first 10 terms of the following series.

$$S = 1 - 2 + 3 - 4 + 5 \dots$$

2. Give two ordered arrays of integers, write a C program to merge the two-arrays to get an ordered array.
3. Write a C++ program to create a class Box containing length, breadth and height. Include following methods in it :
 - (a) Calculate surface area
 - (b) Calculate volume
 - (c) Overload operator == (to check equality of two boxes).

Answer any *one* question.

1×5

4. Explain the concept of prefix and postfix operators.
 5. Write down the basic principles of Object-Oriented Programming (OOP).
 6. What is the difference between Procedural Programming and Object-Orientation Programming?
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