

BACHELOR OF SCIENCE (COMPUTER SCIENCE) (CBCS - 2018 COURSE)
S.Y.B.Sc.(Computer Science) Sem-III :SUMMER- 2022
SUBJECT : OBJECT ORIENTED PROGRAMMING WITH C++

Day : Saturday
Date : 2/7/2022

S-20091-2022

Time : 03:00 PM-06:00 PM
Max. Marks : 60

N.B.

- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.
- 3) Draw neat and labelled diagrams **WHEREVER** necessary.

Q.1 Answer **ANY TWO** of the following: **(12)**

- a) Write a C++ program to implement single inheritance to calculate marks obtained by student.
- b) Write in brief about virtual base class? Why is it needed?
- c) Explain the concept of function overloading with suitable example.

Q.2 Answer **ANY TWO** of the following: **(12)**

- a) Differentiate between early binding and late binding.
- b) State and explain various features of OOP.
- c) Write a C++ program to show the use of inline function. Also state the syntax and purpose of inline function.

Q.3 Answer **ANY TWO** of the following: **(12)**

- a) What is constructor? Discuss various types of constructor.
- b) Write a C++ program to implement a function acting as a friend with two classes.
- c) What is meant by array of objects? Explain with example.

Q.4 Answer **ANY THREE** of the following: **(12)**

- a) State the rules for operator overloading.
- b) What is 'this' pointer? Give example.
- c) Differentiate between C and C++.
- d) Write a note on C++ stream classes.

Q.5 Answer **ANY FOUR** of the following: **(12)**

- a) Write a C++ program to find whether given string is a palindrome.
- b) Write a C++ menu driven program to perform basic arithmetic operations using switch case.
- c) Explain different access specifiers in brief.
- d) What is virtual function? Also write about pure virtual function.
- e) What is typecasting? Explain with example.
- f) Give purpose and example of 'new' and 'delete' operators.

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