

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -1 EXAMINATION- 2024

B.Sc.-II Semester (MATH)

COURSE CODE (CREDITS): 22BS1CI211 (4)

MAX. MARKS: 15

COURSE NAME: INTRODUCTION TO OBJECT ORIENTED PROGRAMMING

COURSE INSTRUCTORS: EPN

MAX. TIME: 1 Hour

Note: (a) All questions are compulsory.

(b) Marks are indicated against each question in square brackets.

(c) The candidate is allowed to make Suitable numeric assumptions wherever required for solving problems

Q1. Find the output of the following C++ code snippet. Assume that the code snippet appear inside the main() function and the header file 'iostream' is included in the program. [CO1, 2M]

(a) <pre>int a=5, b=10; int c = a>b ? a:b; std::cout << c << endl;</pre>

(b) <pre>int const p = 5; std::cout << ++p; return 0;</pre>

(c) <pre>char str[5] = "ABC"; std::cout << str[3]; std::cout << str;</pre>
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(d) <pre>int new = -10; std::cout << "new is: " << new; return 0;</pre>

Q2. Define a class named "Circle" with private data members for radius. Implement a friend function to calculate the area of the circle. Create an object of the "Circle" class, initialize its radius, and use the friend function to calculate and display the area. [CO1, 3M]

Q3. Define a class named "Student" with private data members for name and age. Implement a parameterized constructor to initialize these members. Create an object of the class and display its details. [CO1, 3M]

Q4. Discuss the importance of inline functions in C++ and provide an example. [CO1, 3M]

Q5. Explain the concept of operator overloading in C++. Discuss the significance of operator overloading and how it enhances the readability and usability of the code. [CO2, 4M]