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JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST-1 EXAMINATION – February 2020

B.Tech, IVth Semester, BI

COURSE CODE: **18B11CI415**

MAX. MARKS: **15**

COURSE NAME: **OBJECT ORIENTED PROGRAMMING**

COURSE CREDITS: **4**

MAX. TIME: **One Hr**

Note: All questions are compulsory. Carrying of mobile phone during examinations will be treated as case of unfair means. Missing data, if any, can be appropriately assumed.

- 1(a).** Explain the concept of classes, objects, data members and member functions in C++ a using suitable example. **(2)**
- (b).** Define a class Distance, which stores distance as kilometre and meter. Use a constructor to create objects of type Distance from kilometre and meter. Define functions to add, subtract and display distance. Write a main program to test your class. **(3)**
- 2(a).** What are inline functions and friend functions in C++? Describe a situation where each of these member functions is used. **(2)**
- (b)** Define a class 'MyInteger' which stores any integer number as an array of ASCII charters with a maximum length of 21 bytes. The class should have a constructor to convert from a character string to an object of type 'MyInteger'. A second constructor should convert an integer value to an object of type 'MyInteger'. The class also should have an operator overloading function int() to convert from 'MyInteger' object to integer. Include a member function to display the character string. Write a main program to test your class. **(3)**
- 3.** Define a class Employee with data members name, department and rank. Write a C++ program to read the employee data interactively from the user and store into a binary file, 'employee_data.bin'. **(5)**