JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST - 3 EXAMINATION-2022

B.Tech - III Semester (ECM)

COURSE CODE (CREDITS): 20B11EM311 (3) MAX. MARKS: 35

COURSE NAME: OBJECT ORIENTED PROGRAMMING CONCEPTS

COURSE INSTRUCTORS: DR. NAFIS U. KHAN MAX. TIME: 2 Hours

Note: All questions are compulsory. Marks are indicated against each question in square brackets. Assume the data wherever necessary.

Q1. State the important features of object oriented programming. Compare object oriented programming with procedure oriented programming. CO1[5]

Q2. Write a C++ program by using classes and objects to show the sum of array rows and columns. Write this program by using constructor and do while loop. CO1[5]

Q3. What are single and multiple inheritances. Write a program to find the grades of a student using multiple inheritances according to the following rules: CO2[5]
Grade A, if marks are > 80
Grade B, if marks are >70 and < 80
Grade C, if marks are > 50 and <70
Grade F, if marks are < 40

Q4. Differentiate between the followings: CO3[5]
a) Function overloading and function overriding
b) Constructor overloading and operator overloading

Q5. CO3[5]
a) What is the difference between early binding and late binding in C++?
b) Define Virtual Function. Explain the mechanism of Virtual function.

Q6. CO4[5]
a) How private data of a class can be accessed from outside of the class? Briefly define friend function and friend class in C++ with a suitable concise example.
b) Explain the various file handling mechanisms in C++.

Q7. Write a java program using class concepts to illustrate addition and subtraction operators.
CO4[5]