

KUC Group
Academic Task No. 1

Name of the faculty member:

Course Code:

Program: **B-Tech**

Max. Marks: **30**

Date of Allotment: **06:04.2021**

Course Title: **Object Oriented Programming**

Term:

Is Rubric Applicable: **NA**

Date of Submission: **13.04.2021**

Important Guidelines:

1. All questions in this Academic Task are compulsory.
2. It is mandatory to attempt all questions of the assignment in your own handwriting on A4 size sheets/pages with a blue colour ink pen. Any other mode of attempt (typed or printed codes or table) except hand written/drawn will not be accepted/considered as valid submission(s) under any circumstances.
3. Every attempted sheet/page should carry clear details of student such as Name, Registration number, Roll number, Question number and Page number. The page numbers should be written clearly on the bottom of every attempted sheet in a prescribed format as: for page 1; Page 1 of 4, for page 2; Page 2 of 4, for page 3; Page 3 of 4 and for page 4; Page 4 of 4, in case your assignment/document is of 4 pages.
4. After attempting the answer(s), student needs to take photograph of each of these answer sheets/pages and needs to convert the **jpeg** format images into a **single pdf format document** (can be done with many free online available converters).
5. This PDF file should be uploaded onto the UMS interface on or before the last date of the submission.
6. Refrain from indulging into plagiarism as copy cases will be marked zero.

Choose the correct option

10 mark

1. If following is the sequence of the lines of code, where A is the class, which types of constructors will be called on each line.
A obj; //line 1
A a1 = obj; //line 2
A a2(obj); //line 3

A. Copy, default, parameterized
B. Default, copy, parameterized
C. Default, copy, copy
D. Copy, copy, parameterized
2. Which of the following is true?

A. The number of times destructor is called depends on Number of objects created
B. Destructor is called only once
C. There can be more than one destructors in the class
D. Programmer have to always call destructor at the end of the program

3. State true or false
Type conversion is automatic whereas type casting is explicit
- A. True
 - B. False
4. Operator overloading can't be applied to following operators
- A. Class member access operators (., .*)
 - B. Sizeof
 - C. Conditional operators (?:)
 - D. Pointers (*)
5. Which of the following is true?
- I. Operator overloading allows you to redefine the way operator works for user-defined types only.
 - II. It cannot be used for built-in types.
 - III. Two operators = and & are already overloaded by default in C++.
- A. None of the above
 - B. All
 - C. Only I and II
 - D. Only II and III

Short answer type question?

10 marks

1. What are constructors? Why they are required? Explain different types of constructors with suitable example.
2. What are the different file modes? Illustrate with suitable examples.

Long answer Type question.**10 marks**

1. Create a class called Matrix having the following data members
int rows;
int cols;
int mat[][].

Write a program to implement the following operations (the ones mentioned in comments) on Matrix.
The main() function of the above program is as below:

```
int main() {  
    Matrix m1(3,3); // it will initialize rows and cols  
    m1.getdata(); //accept the data in matrix  
    Matrix m2=m1; //copy one matrix contents into another  
    m2.putdata(); // display the contents of matrix  
    Matrix m3;  
    m3.putdata();  
}
```

2. Write a C++ program to create a new file named “college.txt” to store list of colleges under Punjab university. Read names of 3 colleges (consider input given below) from console and store it in “college.txt”. Further copy contents of “college.txt” in another file “university.txt”. Now open the “university.txt” file and display the following (underlined) characters on console using file manipulation functions.

Input:

Lovely Professional University

Thapar Institute of Engineering and Technology

Dr B R Ambedkar National Institute of Technology