**Jaypee University of Engineering and Technology**

**B. Tech. (CSE) - II Semester**

**Object Oriented Programming (18B11CI211)**

**Tutorial – 3(Function Overloading, Inline function)**

1. Write a function that accepts two arguments: two strings name of a student and name department. Provide a default value for the department so that if you call the function by passing single argument, the department default value should be CSE. Write a main() function that proves you can call the function with a single argument alone as well as with two arguments.
2. Write a C++ program to find area of square, rectangle, circle and triangle by using function overloading
3. Rewrite the following for statement as an equivalent while statement:

f o r (i =0 ; i<m a x \_ l e n g t h ; i ++)

i f (i n p u t \_ l i n e [i ] == ´?´)

q u e s t \_ c o u n t ++;

Rewrite it to use a pointer as the controlled variable, that is, so that the test is of the form

\*p ==´?´.

1. Write declarations for the following:
2. a function taking arguments of type pointer to character and reference to integer and returning no value;
3. a function taking three references of type float as arguments and returning sum of average of these three numbers.
4. Write a C++ program to perform the addition of two complex numbers. Declare a structure named ‘complex’ with two members: ‘real’ and ‘imag’ to store the real and imaginary part of a complex number. Create two variables c1 and c2 from this structure. Create a function called add() with two versions (function overloading). First version will take parameters as call by value and second version will take parameters as call by reference. Call these functions from main function. Based on the output, verify and explain whether this is a valid function overloading in C++.
5. Predict the output of following program

int main()

{

const char\* p = "12345";

const char \*\*q = &p;

\*q = "abcde";

const char \*s = ++p;

p = "XYZWVU";

cout<< \*++s;

return 0;

}