



## INDIAN INSTITUTE OF TECHNOLOGY ROORKEE

### Programming in C and C++ (CST-501)

#### Assignment 1 (Basics of printf)

Q-1) Write a C program to print the following using a single printf statement.

[5 marks]

```
*****  
*      *  
*      *  
*      *  
*      *  
*      *  
*      *  
*      *  
*      *  
*****
```

Q-3) Write a C program to print your Name, Roll No and Branch on the terminal. Compare the *preprocessed file*, *assembly file* and *object file* generated using the *gcc* command. Explain your observation.

[10 marks]

Q-4) You are working as a software intern at a company. One of your tasks is to write lightweight and efficient C code which contains only printf() statements for logging, debugging, and feature-specific outputs that can be easily enabled or disabled at compile time using preprocessor directives. Write an appropriate C program for the same using preprocessor directives.

[20 marks]

Q-5) Write code in C language to print the following outputs using a print statement:

[20 marks]

- Hello World
- "Hello World"
- This is \n a line
- How                      are                      you (without manually giving spaces)
- Bank provides 10% interest
- Hello                      World!                      (using a single printf statement)
- ??!
- Good ^ Day!
- For printing \n we use \\n
- "He"llo wo"rld

Q-6) Write a C program to print "Hello World" without using a semicolon. [15 marks]