

**Total Marks:** 50

**Due Date and Time:** February 9, 2021 6 pm. **No late submission will be permitted.**

**Submission Procedure:** Upload the C program files by the due date and time. The files should be named as specified in each problem statement. Replace ROLLNO with your roll number (all small letters). **Do not upload exe files.**

**NOTE:** Meaningful messages should be printed when input is required from the user and when output is printed.

**Problem 1.** Write a C program called ROLLNO\_bit\_operator.c that asks the user to enter two integers for variables A and n. The output of the program should be the number stored in the n<sup>th</sup> bit position of A. You should use only bitwise operators for this problem. Make sure you check if the entered value for n is a valid input.

Example: Let us assume that an integer occupies 8 bits in a machine, then number 15 is saved as shown below.

Bit position	1	2	3	4	5	6	7	8
Value Stored	0	0	0	0	1	1	1	1

Marks: 15

**Problem 2.** Write a C program called ROLLNO\_alphabet.c that reads an alphabet as input and prints the ASCII code of the alphabet and if that ASCII code is an odd number, it should also print the previous five characters. If the input is not an alphabet, an error message should be printed.

Marks: 15

**Problem 3.** Write a C program called ROLLNO\_number.c that reads an integer value as input and prints as output the digits in the odd position. For example, if your input is 12348, the output should be 8, 3, and 1.

Marks: 20