EE1102 Introduction to Programming **Assignment 1-A**

Total Marks: 50
Due Date and Time: February 2, 2021 6 pm
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.**

Problem 1. Swap two integers: Write a C program called ROLLNO_swap_integers.c that takes as input integer values for two variables, prints the current set of values in the two variables, then swaps the values in the two variables, and prints the values after swapping in the two variables.

Explanation: Let us say that the two variables are x and y with values x = 10 and y = 50. After swapping, the values in x and y should be x = 50 and y = 10. Output should be:

x = 10
y = 50
After swapping:
x = 50
y = 10

Marks: 10

Problem 2. Write a C program called ROLLNO_distance_covered.c that reads speed of a vehicle and time duration of the journey as inputs, computes the distance covered by the vehicle, and prints the input and computed values with meaningful messages.

When the program takes input from the user, a meaningful message should be printed to specify what input is being read. Similarly, when output is printed, meaningful messages should be printed and units of values should be printed wherever appropriate.

Example Output: The text shown in red colour font can be replaced with your own text. Your program need not print these messages in red colour.

Speed of vehicle (km/hr): 80
Time duration of journey (hrs): 1.5
In 1.5 hrs, a vehicle travelling at 80 km/hr covers 120 km.

Marks: 10

Problem 3. Write a C program called ROLLNO_dot_product.c that takes as input the components of two three-dimensional vectors, computes the dot product of the two vectors, and prints the details (input and output) in a meaningful fashion.

Marks: 20

Problem 4. You will be asked a question during the lab session by one of the faculty for the EE1102 course. Marks will be assigned based on your answer to the question.

Marks: 10