C Programming Practice Questions

1. Struct and Book Details

Define a struct called Book with the following members:

  - title (string)

  - author (string)

  - price (float)

  - pages (integer)

Write a C program to:

  - Take input for 3 books.

  - Print out the details of the book with the highest price.

2. Point Struct and Distance Calculation

Define a struct called Point with x and y coordinates (both double).

Write a function 'double distance(struct Point p1, struct Point p2)' that takes two Point structs as parameters and returns the distance between them.
Test the function with various points.

3. Student Struct and Average Marks Calculation

Define a struct called Student with:

  - name (string)

  - roll_number (integer)

  - marks (array of integers, size 3 for three subjects)

Write a C program to:

  - Take input data for 5 students.

  - Write a function to calculate the average marks of each student and print the name of the student

with the highest average marks.

4. Enum Traffic Light

Define an enum called TrafficLight with values RED, YELLOW, and GREEN.

Write a program to:

  - Take user input to select a traffic light color.

  - Print the action to be taken (e.g., 'Stop' for RED, 'Caution' for YELLOW, 'Go' for GREEN).

5. Factorial Calculation Function

Write a function 'int factorial(int n)' to calculate the factorial of a given integer n.

Write a C program that:

  - Takes an integer input from the user.

  - Calls factorial() and prints the result.

6. Find Largest Number in an Array

Write a function 'int findLargest(int arr[], int size)' that takes an integer array and its size as

parameters and returns the largest number.

Write a C program that:

  - Takes an array of 10 integers as input.

- Calls the function to find and print the largest number in the array.