Name: Student ID:
Group: Date of experiment:

Experiment 7. Conservation of Momentum

1. Calculate the initial and the final momentum of the system for the collisions below:
    a) Completely Inelastic Collision for both equal mass carts and unequal mass carts.
    b) Elastic Collisions for both equal mass carts and unequal mass carts.

2. Plot the Graphs of total momentum (P_{total}) vs. time and total kinetic energy (KE_{total}) vs. time for all the cases mentioned in Question 1. (Two Graphs required. (a)P_{total} vs. time; and (b) KE_{total} vs. time for all the collisions)

3. Explain the Graphs in Question 2. What happens before, during, and after the collisions in terms of momentum, velocity, and kinetic energy?

Appendix:
Attach the table in Procedure explosions, Inelastic collisions, elastic collisions. (You should write a clear and detailed caption for each table.)

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--- End of Laboratory Report ---

Notes:

- **Submit soft copies online.**
- **No further modification allowed after deadline.**
- **No figure is required if not specified.**