Name: Student ID:
Group: Date of experiment:

Experiment 6. Centripetal Force

1. Plot the centripetal force (F) vs. mass (m), what is the relationship between them?

2. Plot the centripetal force (F) vs. square of the tangential speed (v^2), what is the relationship between them?

3. Plot the centripetal force (F) vs. the radius of the rotating arm (r), what is the relationship between them?

4. Can you verify the equation from the theory $F = mv^2/r$, why? Does the friction force between the mass and the rotating arm affect your experiment, how?

Appendix:
Attach the table in <u>Procedure m</u>, <u>Procedure v</u>, and <u>Procedure r</u>. (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.**