PAPER: PHSA CC2 PRACTICAL EXAMINATION 2020

F.M: 15 **TIME: 1 hr**

*Answer **Any One** Question from the Following*

1. **To determine the moment of inertia of a flywheel.**

i). What is a flywheel and what is its practical advantage? [2+1]

ii). Why should the length of the string be less than the height of the axle from the ground? [2]

iii). About what axis do you find the moment of inertia of flywheel? [2]

iv). Write down the expression for the moment of inertia of flywheel. Explain the constants. [6]

v). Write is the way to reduce friction in a flywheel. [2]

2. **To determine the value of g using bar pendulum**

i) Write down the expression for the value of g and explain the constants involved. [5]

ii) What is the radius of gyration? [3]

iii) What is meant by the 'equivalent length of the pendulum? [2]

iv) What is the time period of the pendulum at its center of gravity? [2]

v) What do you mean by ' center of suspension' and 'center of oscillation'? [3]

3. **To find Young's modulus , modulus of rigidity, and Poisson's ratio using Searl's apparatus.**

i) Write an expression for Young's modulus used in the experiment (working formula) explain the constants involved? [5]

ii) What method of oscillation is used to determine the Young's modulus? [1]

iii) What method of oscillation is used to determine modulus of rigidity ? Write its expression and explain the constant involved in it. [4+1]

iv) How Poisson's ratio is calculated in this experiment ? Mention its maximum value . [2+2]