## U.G. 1st Semester Examination - 2020 PHYSICS [HONOURS] GENERAL ELECTIVE COURSE Course code : PHY-H-GE-P-01 (MECHANICS)

## PRACTICAL

Full Marks : 20

Time : 2 Hours

Answer any two questions from the following :

- How do we calculate gravitational constant (g) using Kater's pendulum? Write down the working formula to calculate gravitational constant (g) using motion of a spring (using spring constant).
  (8+2)
- 2) What is Vernier constant ? How do we calculate vernier constant ? What is screw pitch ? What is the least count ? How do we calculate the least count ? (2+2+2+2+2)
- How do we calculate the moment of inertia of a flywheel ? Write down the working formula to calculate the Young's modulus and the modulus of rigidity for the material of a wire by Searle's method. (6+2+2)
- 4) Give the definition of a compound pendulum. How do we calculate the acceleration due to gravity by using a bar pendulum ? What is Poisson's ratio ? What is the relation between Poisson's ratio, Young's modulus and modulus of rigidity ?

(2+4+2+2)