

Class assignment

1. Explain the following key areas that biomechanics focuses on:

- **Dynamics:** Studying systems that are in motion with acceleration and deceleration
- **Kinematics:** Describing the effect of forces on a system, motion patterns including linear and angular changes in velocity over time as well as position, displacement, velocity, and acceleration are studied.
- **Kinetics:** Studying what causes motion, the forces, and moments at work
- **Statics:** Studying systems that are in equilibrium, either at rest or moving at a constant velocity

2. State three properties of liquids

- i. Has density
- ii. Has specific weight
- iii. Has a specific volume

3. State THREE types of fluids

- i. Ideal fluid
- ii. Real fluid
- iii. Non-Newtonian fluid
- iv. Ideal plastic fluid

4. State the factors that affect the way the body's muscles, bones and ligaments adapt to regular exercise and heavy sports

- The type of exercise
- The intensity of exercise
- The frequency of exercise
- The duration of exercise