

Question Paper

Topic 1: Mechanics

Q1. What is the term used to describe the force that opposes motion between two surfaces in contact?

Friction

Gravity

Magnetism

Tension

Answer: Friction

Explanation: Friction is the force that opposes motion between two surfaces in contact, causing resistance to the relative motion of the objects.

Q2. Explain the difference between static and kinetic friction.

Answer: Static friction occurs when an object is at rest and is overcome by the applied force to set the object in motion, while kinetic friction opposes the motion of an object already in motion.

Explanation: Static friction is the frictional force that prevents an object from moving when a force is applied but the object is not in motion. Kinetic friction, on the other hand, is the frictional force that opposes the motion of an object already in motion.