Physics
Quiz # 1

Date Given: April 8, 2022
Date Due: April 14, 2022

Q1. The statement that the acceleration of a particle is proportional to the resultant force acting on it and is in the direction of this force is:

(a) Newton's Second Law.
(b) Galileo's Law.
(c) Newton's First Law.
(d) Newton's Third Law.

Answer:
(a) Newton's second law states that the acceleration of a particle is proportional to the resultant force acting on it and is in the direction of this force.

Q2. The mass of a body is:

(a) Equivalent to its weight.
(b) Inversely proportional to the resistance of the body to a change in its motion.
(c) A quantitative measure of the inertia of the body.
(d) Dependent upon how far the body is from the center of the Earth.

Answer:
(c) Mass is a quantitative measure of the inertia or resistance to change in motion of a body. Weight is a force calculated as the product of mass and the acceleration due to gravity.

Q3. Force is a:

(a) Scalar.
(b) Vector.

Answer:
(b) Force is a vector quantity specified by both magnitude and direction.

Q4. Mass is a:

(a) Vector.
(b) Scalar.

Answer:
(b) Mass is specified by magnitude only and it does not have any directional aspects, so it is a scalar quantity.

Q5. A rigid body is an object:

(a) For which the dimensions are irrelevant to the description of its motion or the action of forces upon it.
(b) Whose changes in shape are negligible compared with the overall dimensions of the body or with the changes in position of the body as a whole.
(c) Whose dimensions are negligible.
(d) That is always at rest.

Answer:
(b) A rigid body is a body whose changes in shape are negligible compared with the overall dimensions of the body or with the changes in position of the body as a whole.