



ST. LAWRENCE HIGH SCHOOL



A JESUIT CHRISTIAN MINORITY INSTITUTION

Subject- Physics

Worksheet- 14

Class – IX

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1st Term

Question.1: If a bus starts suddenly, the passengers in the bus will tend to fall

- (a) In the direction opposite to the direction of motion of bus.
- (b) In the same direction as the direction of motion of bus.
- (c) Sideways.
- (d) None of the above.

Question.2: An athlete runs some distance before taking a long jump because

- (a) He gains energy to take him through long distance.
- (b) It helps him to apply large force.
- (c) By running action and reaction forces increase.
- (d) By running the athlete gives himself larger inertia of motion.

Question.3: A rider on a horseback falls back when horse starts running all of a sudden because

- (a) Rider is taken back.
- (b) Rider is suddenly afraid of falling.
- (c) Inertia of rest keeps the upper part of body at rest whereas the lower part of the body moves forward with the horse.
- (d) None of the above.

Question.4: Inertia is a property of a body by virtue of which the body is

- (a) Unable to change by itself the state of rest.
- (b) Unable to change by itself the state of uniform motion in a straight line.
- (c) Unable to change by itself the direction of motion.
- (d) Unable to change by itself the state of rest or uniform motion in a straight line.

Question.5: Qualitative definition of force is given by

- (a) Newton's first law of motion.
- (b) Newton's second law of motion.

- (c) Newton's third law of motion.
- (d) Newton's law of gravitation.

Question.6: SI unit of force is

- (a) kg m/s.
- (b) Newton.
- (c) Dyne.
- (d) None of these.

Question.7: A driver accelerates his car first at the rate of 1.8 m/s^2 and then at the rate of 1.2 m/s^2 . The ratio of the two forces exerted by the engine in the two cases will be

- (a) 1: 2
- (b) 2: 1
- (c) 2: 3
- (d) 3: 2

Question.8: Newton's law of motion gives the measure of

- (a) Force
- (b) Acceleration
- (c) Momentum
- (d) Impulse.

Question.9: An object will continue to accelerate until

- (a) The resultant force begins to decrease.
- (b) The resultant force on it is zero.
- (c) The velocity changes direction.
- (d) The resultant force on it is increased continuously.

Question.10: A canon after firing recoils due to

- (a) Conservation of energy.
- (b) Backward thrust of gases.
- (c) Newton's third law of motion.
- (d) Newton's first law of motion.

Question.11: A rocket or jet engine works on the principle of

- (a) Conservation of energy
- (b) Conservation of momentum
- (c) Conservation of mass
- (d) Newton's second law of motion.

Question.12: $\text{kg}\cdot\text{m}/\text{s}^2$ is the unit of

- (a) Momentum
- (b) Speed
- (c) Acceleration
- (d) Force

Question.13: Rate of change of momentum is equal to

- (a) Acceleration
- (b) Work done
- (c) Force
- (d) Impulse

Question.14: When an object undergoes acceleration

- (a) Its speed always increases
- (b) Its velocity always increases.
- (c) It always falls towards the earth
- (d) A force always acts on it.

Question.15: When a net force acts on an object, the object will be accelerated in the direction of the force with acceleration proportional to

- (a) The force on the object
- (b) The velocity of the object
- (c) The mass of the object
- (d) The inertia of the object

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