



ST. LAWRENCE HIGH SCHOOL



A JESUIT CHRISTIAN MINORITY INSTITUTION

Subject- Physics Worksheet- 15

Class – IX

Date-15.04.2020

1stTerm

Topic –Linear Momentum

Question 1.

Q. In this type of collision, objects tend to "stick" together.

answer choices

elastic

inelastic

They "stick" together in both types of collisions

• Question 2

Q. A 0.250 kg cart moving at 0.400 m/s has how much momentum?

answer choices

0.1 kg-m/s

1 kg-m/s

10 kg-m/s

100 kg-m/s

• Question 3

Q. When the speed of an object is doubled, its momentum

answer choices

remains unchanged in accord with the conservation of momentum.

doubles

quadruples

decreases

• Question 4

Q. A big fish swims upon and swallows a small fish at rest. After lunch, the big fish has less

answer choices

momentum

velocity

mass

- Question 5

Q. An 1 kg object moving to the right at 2 m/s collides inelastically with a 1 kg object moving to the left at 2 m/s. The final velocity of both objects will be

answer choices

0 m/s

1 m/s

2 m/s

4 m/s

- Question 6

Q. Which object listed below has the greatest momentum?

answer choices

A 0.05 kg object rolling at 0.2 m/s.

A 0.15 kg object rolling at 2 m/s.

A 0.15 kg object rolling at 1 m/s

A 0.4 kg object rolling at 2 m/s.

- Question 7

Q. Two football players with mass 75 kg and 100 kg run directly toward each other with speeds of 6 m/s and 8 m/s respectively. If they grab each other as they collide, the combined speed of the two players just after the collision would be:

answer choices

2 m/s

3.4 m/s

4.6 m/s

7.1 m/s

• Question 8

Q. A 2 kg cart has a momentum of 16 kg m/s. What is its velocity?

answer choices

8 m/s

32 m/s

0.125 m/s

18 m/s

• Question 9

Q. The law of conservation of momentum states that,

answer choices

p before is less than p after

p before is the same as p after

p before is more than p after

• Question 10

Q. The units for Impulse are

answer choices

N/s

N-s

N

m/s

• Question 11

Q. Momentum is conserved in this type of collision

answer choices

elastic

inelastic

momentum is conserved in both types of collisions

• Question 12

Q. Cart A is pulled with a 2 Newton force for 2 seconds, and Cart B is pulled with a 1 Newton force for 3 seconds. Which cart experiences the greatest impulse?

answer choices

Cart B

Cart A

they are the same

- Question 13

Q. A bug flies into the windshield of a car going the opposite way. Which of the following are true.

[answer choices](#)

the force of impact is the same for both

the impulse is the same for both

the acceleration of the bug is larger than the truck

A, B, and C are all true

- Question 14

Q. Momentum is a _____ quantity

[answer choices](#)

science

scalar

vector

energy

- Question 15

Q. A 10kg toy truck moves at 5m/s East. It collides head-on with a 5kg toy car moving 10 m/s moving west. What is the total momentum of the system?

[answer choices](#)

0 kgm/s

30 kgm/s

50 kgm/s

10 kgm/s

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