Unit 4 Reading Quiz

This is a preview of the draft version of the quiz

Started: Sep 23 at 9:34am

Quiz Instructions

Question 1 — 1 pts

Which of the following is Newton's first law?

- what comes up must come down
- every object will remain at rest or in uniform motion in a straight line unless compelled to change its state by the action of external unbalanced forces
- every action (force) in nature has an equal and opposite reaction (force) that each act on different objects
- net force equals mass multiplied by acceleration

Question 2 — 1 pts

Which of the following is Newton's third law?

- every object will remain at rest or in uniform motion in a straight line unless compelled to change its state by the action of external

unbalanced forces

- every action (force) in nature has an equal and opposite reaction (force) that each act on different objects
- net force equals mass multiplied by acceleration
- what comes up must come down

Question 3

1 pts

Which of the following is Newton's second law?

- every object will remain at rest or in uniform motion in a straight line unless compelled to change its state by the action of external unbalanced forces
- what comes up must come down
- every action (force) in nature has an equal and opposite reaction (force) that each act on different objects
- net force equals mass multiplied by acceleration

Question 4

1 pts

Forces are an interaction between two objects--you can't touch without being touched.

- True
- False

Question 5

1 pts

Which of the following was NOT mentioned as a force?

- centrifugal
- lift
- normal
- thrust
- drag
- frictional

Question 6

1 pts

When we label forces, we want to indicate the type of interaction between the objects, what object the force is acting on and what object the force is by. There are three places (1st, 2nd and 3rd) in the force subscript. In which place is the 'kind' of force listed?

- 2nd
- 4th
- 1st
- 3rd

Question 7

1 pts

When we label forces, we want to indicate the type of interaction between the objects, what object the force is acting on and what object the force is by. There are three places (1st, 2nd and 3rd) in the force subscript. In which place is the 'victim' or 'receiver' of the force listed?

- 1st
- 4th
- 2nd
- 3rd

Question 8

1 pts

When we label forces, we want to indicate the type of interaction between the objects, what object the force is acting on and what object the force is by. There are three places (1st, 2nd and 3rd) in the force subscript. In which place is the

'agent' or 'perpetrator' of the force listed?

- 4th
- 3rd
- 2nd
- 1st

Question 9

1 pts

The object under consideration as the 'surroundings'.

- True
- False

Question 10

1 pts

Everything else in the environment that might in any significant way affect the system as the 'object'.

- True
- False

Question 11

1 pts

Since the shape of the object is unimportant for a force diagram, we shrink it to a point.

- True
- False

Question 12

1 pts

The point mass which represents the object for which we draw a force diagram should be placed at the intersection of a set of coordinate
axes with one of the axes parallel to the direction of motion.

- True
- False

Question 13

1 pts

When drawing a force diagram, do NOT enclose the system within a system boundary.

- True
- False

Question 14

1 pts

It is necessary to proceed around the system boundary line and identify all points at which there is contact between the system and its surroundings.

- True
- False

Question 15

1 pts

When drawing force diagrams, you should indicate which forces (if any) are equal in magnitude to other forces.

- True
- False

Question 16

1 pts

An elephant and a mouse are 100 meters apart in outer space where we assume the only forces acting on the two is force gravity. Which of the following is true?

- the mouse exerts more force gravity on the elephant than the elephant on the mouse
- the mouse exerts less force gravity on the elephant than the elephant on the mouse
- the force gravity on the elephant from the mouse is the same as the force gravity of the mouse on the elephant

Question 17

1 pts

An elephant and a mouse are 100 meters apart in outer space where we assume the only forces acting on the two is force gravity. Which of the following is true?

- The mouse and elephant will meet in the middle at 50 meters.
- The elephant and mouse will meet closer to the mouse.
- The mouse and elephant will meet closer to the elephant.

Question 18

1 pts

The earth exerts the same force gravity on the moon as the moon exerts on the earth.

- True

- False

Question 19 — 1 pts

Since the earth has more mass than the moon, the earth exerts more force gravity on the moon than the moon exerts on the earth.

- True
- False

Question 20 — 1 pts

A penny dropped from a helicopter in free fall exerts the same force gravity on the earth as the earth exerts on the penny.

- True
- False

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