6th Science Lesson 2 Questions in English

2] Force and motion

1. An object appearing in rest for one will appear _____ to another.

a) Moving
b) Rest
c) Depends on the person
d) None of the above

Explanation

An object may appear to be stationary for one observer and appear to be moving for another. An object is at rest in relation to a certain set of objects and moving in relation to another set of objects. This implies that rest and motion are relative.

2. _____ said that like the banks of the river appear to move back to a person in a boat floating gently in a river, the night sky studded with stars appear to move from east to west while Earth rotates from west to east.

a) Einstein
b) Aryabatta
c) William blake
d) None of the above

Explanation

Aryabatta, an ancient Indian astronomer, said that like the banks of the river appear to move back to a person in a boat floating gently in a river, the night sky studded with stars appear to move from east to west while Earth rotates from west to east.

3. Force is a

a) Pull force
b) Push force
c) Both a and b
d) None of the above

Explanation

Forces are push or pull by an animate or inanimate agency.

4. Which pulls the ripen coconut from the tree to the ground?

a) Plant
b) Tree

c) Gravity
d) None of the above

Explanation

Mysteriously ripen coconut falls to the ground. What pulls it to the ground? We would have heard of the 'force of gravity' of Earth. Gravity pulls the ripen coconut from the tree to the ground.

5. Find the examples for non contact forces?

a) Gravity
b) Magnetic
c) Electric
d) Both a and b

Explanation

Bring a magnet near the small iron nail. Suddenly the nail jumps into the air and sticks with the magnet. Observe that the magnet and the nail did not touch each other. Still, there was a pulling force that made the nail to jump towards the magnet. In these two examples, the force is applied without touching the object. Such forces are known as "non-contact forces".

6. Find the example for contact forces?

a) Flag fluttering
b) A cart pulled by bullock
c) Magnetism
d) Both a and b

Explanation

Forces can be classified into two major types; contact and non-contact forces. Wind is making a flag flutter, a cart pulled by a bullock are contact forces. Magnetism, gravity are some examples of non-contact forces.

7. Which of the following changes when force is applied

a) Speed
b) Direction
c) Both a and b
d) None of the above

Explanation

Application of force on object results in a change in its speed and change in its direction.

8. Find the correct regarding forces

a) Change the states of body from rest to motion or motion to rest
b) Either change the speed or direction or both of the body.
c) Change the shape of the body.
d) All the above

Explanation

Forces can 1. Change the states of body from rest to motion or motion to rest. 2. Either change the speed or direction or both of the body. 3. Change the shape of the body.

9._____ is moving in a straight line, like a person walking on a straight path, free fall.

a) Curvilinear
b) Circular
c) Rotatory
d) Linear

Explanation

Linear - moving in a straight line, like a person walking on a straight path, free fall.

10. Swirling stone tied to the rope is an example of

a) Circular
b) Linear
c) Curvilinear
d) None of the above

Explanation

Circular -moving in a circle, swirling stone tied to the rope.

11. The movement of a body about its own axis is

a) Rotatory
b) Revolutionary
c) Circular
d) None of the above

Explanation

Rotatory -The movement of a body about its own axis, like a rotating top.

12. Coming back to the same position after a fi xed time interval, like a pendulum.

a) Rotatory
b) Revolutionary
c) Circular

d) Oscillatory

Explanation

Oscillatory -coming back to the same position after a fi xed time interval, like a pendulum.

13. Fast oscillations are referred to as

a) Oscillations
b) Vibrations
c) Hanging
d) None of the above

Explanation

When the oscillation is very swift, it is called as vibration. Fast oscillations are referred to as vibrations.

14. In a day the hour hand of the clock makes

a) 3 rounds
b) 1 round
c) 2 rounds
d) None of the above

Explanation

Take the case of the hour hand of a clock. In one day it makes two rounds. Look at a bouncing ball. It bounces a certain number of times for a given time interval or period. Look at the water waves, in a given period that is a time interval; a fixed number of waves hit the shore.

15. Children playing in a swing is

a) Oscillatory
b) Periodic
c) Both a and b
d) None of the above

Explanation

Revolution of the moon around the earth is periodic but not oscillatory. However, the children playing in a swing is both periodic and oscillatory.

16. The distance travelled by an object in unit time is called

a) Speed
b) Velocity

c) Average speed
d) None of the above

Explanation

The distance travelled by an object in unit time is called average speed of the object. If an object travelled a distance (d) in time (t) then its Average speed (s) is = distance travelled / time taken = d/t.

17. SI unit of speed is

a) ms
b) sm
c) m/s
d) sm^{-1}

Explanation

In science we generally use SI units. In SI units the unit of distance is metre and the unit of time is second. So, the SI unit of average speed is metre/second.

18. speed s, distance d, time t, speed =

a) t/s
b) st
c) s/t
d) None of the above

Explanation

Speed = distance travelled / time taken (s = d/t) s = d/t or st = d therefore the distance travelled is speed × time.

19. A Cheetah is the fastest land animal running with an average speed of

a) 90 kmph
b) 112 kmph
c) 150 kmph
d) 200 kmph

Explanation

A Cheetah is the fastest land animal running with an average speed of 112 km/h.

20. What motion does a cycle do

a) Linear

b) Circular
c) Rotation
d) Revolution

Explanation

The tyres rotate and make a rotatory motion, but the cycle as such moves forward in a linear path.

21. The term robot comes from

a) French
b) Czech
c) English
d) Greek

Explanation

The term comes from a czech word, 'robota' meaning 'forced labour'. Robotics is the science and study of robots.

22. The sense of touch for a robot is given by

a) Heat sensor
b) Pressure sensor
c) Electronic sensor
d) None

Explanation

Twin video cameras give the robot a 3-D view of the world. Microphones detect sounds. Pressure sensors give the robot a sense of touch, to judge how hard to grip an egg.