

1. Product of Force and Velocity is called:
A. Work
B. Power
C. Energy
D. Momentum
2. With the increase of pressure, the boiling point of any substance
A. Increases
B. Decreases
C. Remains Same
D. Becomes zero
3. Which law is also called the law of inertia?
A. Newton's first law
B. Newton's Second Law
C. Newton's Third Law
D. All of these
4. Energy possessed by a body in motion is called
A. Kinetic Energy
B. Potential Energy
C. Both A and B
D. None of these
5. The rotational effect of a force on a body about an axis of rotation is described in terms of the
A. Centre of gravity
B. Centripetal force
C. Centrifugal force
D. Moment of force
6. For an object moving in uniform circular motion, the direction of the instantaneous acceleration vector is:
A) tangent to the path of motion
B) equal to zero
C) directed radially outward
D) directed radially inward
7. A pendulum which is suspended from the ceiling of a railroad car is observed to hang at an angle of 10 degrees to the right of vertical. Which of the following answers could explain this phenomena?
A) The railroad car is at rest.
B) The railroad car is accelerating to the left.
C) The railroad car is moving with constant velocity to the right.
D) The railroad car is accelerating to the right
8. In physics, a radian per second is a unit of:
A) angular displacement
B) angular velocity
C) angular acceleration
D) angular momentum.
9. A worker lifts a 10 kilogram block a vertical height of 2 meters. The work he does on the block is:
A) 5 Joules
B) 20 Joules
C) 49 Joules
D) 200 Joules
10. The time needed for a net force of 10 newtons to change the velocity of a 5 kilograms mass by 3 meters/second is:
A) 1.5 seconds
B) 6 seconds
C) 16.7 seconds
D) 150 seconds
11. The value of G, the universal gravitational constant, was measured experimentally by:
A) Newton
B) Cavendish
C) Copernicus
D) Kepler

12. As a 10 kilogram mass on the end of a spring passes through its equilibrium position, the kinetic energy of the mass is 20 joules. The speed of the mass is:

- A) 2.0 meters per second
- B) 4.0 meters per second
- C) 5.0 meters per second
- D) 6.3 meters per second

14. The SI unit of pressure is the:

- A) Torr
- B) dyne per centimeter squared
- C) atmosphere
- D) pascal

15. A ball falling vertically from rest for 3 seconds travels very nearly:

- A) 14.7 meters
- B) 29.4 meters
- C) 44.1 meters
- D) 88.2 meters

16. A girl throws a 0.1 kilogram ball at a wall. The ball hits the wall perpendicularly with a velocity of 5 meters per second and then bounces straight back with a velocity of 4 meters per second. The change in the momentum of the ball is:

- A) 0.1 kilogram-meters per second
- B) 0.4 kilogram-meters per second
- C) 0.5 kilogram-meters per second
- D) 0.9 kilogram-meters per second

17. The first instrument used for measuring temperature was the gas thermoscope invented by:

- A) Celsius
- B) Galileo
- C) Centigrade
- D) Fahrenheit

18. The first law of thermodynamics is concerned with the conservation of

- A) energy
- B) momentum
- C) charge
- D) matter

19. Which of the following best completes the statement: The calorie is the amount of heat needed to raise:

- A) 1 gram of water 1 degree Celsius
- B) 1 gram of water 1 degree Rankin
- C) 1 kilogram of water 1 degree Celsius
- D) 1 kilogram of water 1 degree Kelvin

20. The amount of heat required to change a boiling liquid to a gas at the same temperature depends on one of the following properties of the liquid. Does it depend on the liquid's:

- A) heat of fusion
- B) heat of vaporization
- C) temperature
- D) density

21. A toy train moves in a circle of 8 meters radius with a speed of 4 meters per second. What is the magnitude of the acceleration of the train?

Answer:

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Answer:

23. The constant potential difference across a 2 ohm resistor is 20 volts. How many watts of power are dissipated by this resistor?

Answer:

24. If a sled has a constant acceleration of 2 meters per second squared and starts from rest, the distance in meters that it will have covered after 5 seconds is:

Answer:

25. What is 20 degrees Celsius in degrees Kelvin?

Answer:

