

تجميعات الفيدياء (الميد الثاني)

2020__1441

Great hopes require a great
efforts. 😊

Question No. 3

A 1000-kg car that has kinetic energy of 450 kJ is going with a speed of:

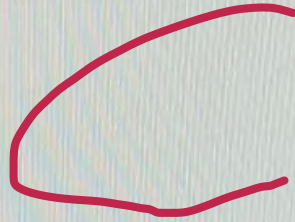
- 144 km/h
- 120 km/h
- 108 km/h
- 130 km/h

$$K_E = \frac{1}{2} m v^2$$

الانيس تحول الناتج

SHIFT → 8 → 20

m/s → km/h



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Question No. 16

The power needed to speed up a 1000-kg car from zero km/h to 108 km/h in 10 seconds

- 45 kW
- 75 kW
- 55 kW
- 65 kW

$$W = KE$$

$$P = \frac{\frac{1}{2} m v^2}{t}$$

اقسم الناتج بـ 1000

A

Total questions in exam: 25 | Answered: 10

Question No. 25

When a falling object is in non-free fall,:

- it must have a small volume.
- air resistance is considered.
- it must have a small mass.
- its acceleration is equal to that due to gravity.

B



Question No. 3

As an object is freely falling its acceleration is:

- constant but not zero.
- zero.
- decreasing.
- increasing.



A

Question No. 13

Temperature is measured with a:

- protractor
- thermometer

D

Total questions in exam: 25 | Answered: 2

Question No. 12

Neglecting air resistance, if a stone is thrown straight up with initial speed = 30 m/s, it will reach its maximum height

- 1 s
- 6 s
- 10 s
- 3 s

$$g = \frac{v_f - v_i}{t}$$

D

Question No. 23

A cart carrying a 500-N box is pushed horizontally on a level ground by the weight of the box on the cart is: _____

- 5000 J
- 50 J
- 500 J
- 0 J

D

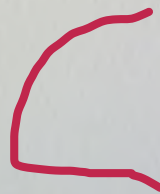
MKCL OES

Question No. 19

The power developed for doing a 140-kJ work in 7 s is.

- 280 kW
- 20 W
- 20 kW
- 280 W

$$P = \frac{W}{t}$$



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Total questions in exam: 25 | Answered: 15

Question No. 3

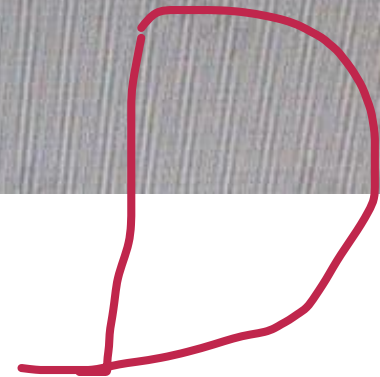
A 5-N object is freely falling from a height of 20 m. Its speed after it loses 25% of its initial potential energy is approximately:

- 25 m/s
- 20 m/s
- 75 m/s
- 10 m/s

$$V = \sqrt{2gh}$$

$$20 \times 0.25 = 5$$

$$V = \sqrt{2 \times 10 \times 5}$$



Question No. 8

If a car's average speed is 30 m/s on a 5-hour trip, the total distance it covers is:

- 504 km
- 540 km
- 450 km
- 150 km

$$V = \frac{d}{t}$$

SHIFT → 8 → 20
m/s → km/h

B

Save & Next حفظ والتالي

Total questions in exam: 25 | Answered: 0

Question No. 1

If a worker did work of 510 J to lift a mass of bricks to a height of 3 m. This mass is:

- 27 kg
- 17 kg
- 10 kg
- 25 kg

$$W = mgs$$
$$F = mg$$

B

Question No. 7

If an object is freely falling, the distance traveled:

- changes with time.
- changes with mass.
- does not depend on time.
- changes with volume.

A



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Question No. 19

The power of an engine that developed to do a work of 450 kJ in 30 s

- 15 kW
- 135 W
- 150 kW
- 1350 W

$$P = \frac{W}{t}$$

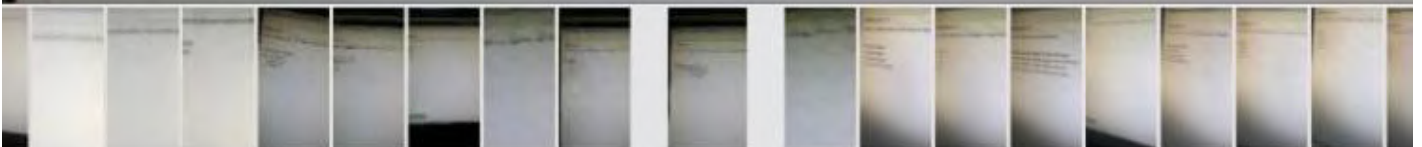
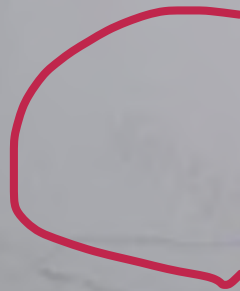
A



Question No. 6

As an object is freely falling, the speed by which it hits the ground is

- zero
- smaller than the initial speed.
- greater than the initial speed.
- same as the initial speed.



Question No. 17

A pump is needed to lift 3000 L of water in a minute a distance of 30 m. What power must the pump be able to deliver? (1 L of water has a mass of 1 kg)

- 15 kW
- 25 kW
- 20 kW
- 30 kW

A

$$P = \frac{3000 \times 10 \times 30}{60}$$

Question No. 21

You raised a 10-kg object to a height of 3 m, and your friend raised the same object to a height of 1 m. The work done by your friend is

- one third your work
- same as your work
- half your work
- four times your work

A

1	2	3
4	5	6
7	8	9
10	11	12
13	14	15
16	17	18
19	20	21
22	23	24

Question No. 18

You raised a 10-kg object to a height of 2 m, and your friend raised a 20-kg object to a height of 1 m. The work done by your friend is:

- same as your work
- half your work
- four times your work
- double your work

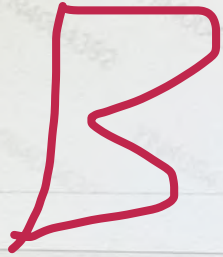
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Question No. 5

Two forces 10 N and 25 N act in opposite direction on an object which moved with an acceleration of 3 m/s². The mass of this object is:

- 3 kg
- 5 kg
- 12 kg
- 8 kg

$F = ma$
 $25 - 10 = 15$



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Question No. 3

An object is thrown vertically upward. Its speed at the maximum height is:

- > zero
- zero
- maximum
- < zero

B

Question No. 4

An object is thrown vertically upward. As it is going upward the speed

- zero
- constant
- increasing
- decreasing

D

CHAPTER 2: MOTION & ENERGY

Formulas & Constants

Average speed $\bar{v} = \frac{d}{t} = \frac{u+v}{2}$	$v = \frac{d}{t}$ $t = \frac{d}{v}$	$v^2 - u^2 = 2ad$	$v_t = u + g \cdot t$ $v = g \cdot t \quad (u=0)$	$d = \frac{1}{2} a t^2 + v_i t$ $d = \frac{1}{2} g t^2 \quad (v_i=0)$	$IX = \text{constant}$ (straight const.)
$F = ma$	$w = mg$	$P = W / t$	$W = F \cdot d \cdot \cos \theta$	$PE = mgh$ $KE = \frac{1}{2} m \cdot v^2$	$v_t = \sqrt{2gh}$
$R_{total} = R_1 + R_2$	$R^2 = X^2 + Y^2$	$3.0 \times 10^8 = c$	$1 \text{ m/s} = 3.6 \text{ km/h}$	$g = 10 \text{ m/s}^2$	$1 \text{ hp} = \frac{1}{75} \text{ kW}$

Key Terms & Definitions

Question No. 15

If you did a work of 210 J to place a 7-kg box on the

- 1 m
- 3 m
- 2 m
- 4 m

$$W = mgs$$

B

Total questions in exam: 25 | Answered: 0

Question No. 1

The height a 20-kW motor can lift a 1000-kg mass to in 10 seconds is:

- 40 m
- 20 m
- 10 m
- 30 m

B

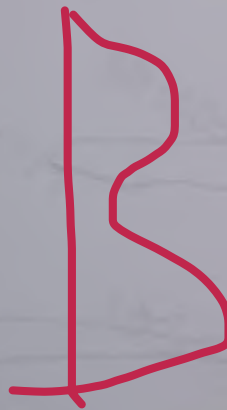
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Total questions in exam: 25 | Answered: 0

Question No. 17

According to Newton's second law ($F=ma$), if m is kept constant, then:

- $F = a/m$
- F is directly proportional to the acceleration a
- F is inversely proportional to the acceleration a
- $a = m$



Question No. 1

A car is moving with 90 km/h for 3 hours and then took a rest for 10 min. The car then continues with 130 km/h for an hour. The average speed for this journey is approximately.

- 80 km/h
- 96 km/h
- 110 km/h
- 120 km/h

B

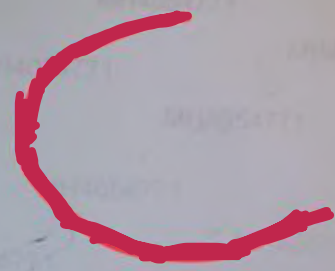
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Questions in exam 25 | Answered

Question No. 9

Work is defined as the product of (force in the direction of motion) and

- time
- acceleration
- displacement
- velocity



Total questions in exam: 25 | Answered: 11

Question No. 25

The friction force between two surfaces depends on:

- nature of the surfaces and their area
- nature of the surfaces and the normal force
- only the normal force
- only nature of the surfaces

B

Total questions in exam: 25 | Answered: 15

Question No. 3

A 5-N object is freely falling from a height of 20 m. Its speed after it loses 25% of its initial potential energy is approximately:

- 25 m/s
- 20 m/s
- 75 m/s
- 10 m/s

D

Question No. 10

A worker pushes a cart carrying a 450-N box a distance of 20 m by exerting a constant force of 40 N in the direction of motion. The work done by the worker is:

- 90 J
- 900 J
- 80 J
- 800 J



Question No. 10

The time taken by a 10-kW motor to raise a 1000-kg mass to a platform 10 m above the floor is

- 5 s
- 15 s
- 10 s
- 20 s

Question No. 23

The power needed to speed up a 1000-kg car from zero km/h to 72 km/h in 10 seconds is:

- 30 kW
- 40 kW
- 50 kW
- 20 kW

D

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Total questions in exam: 25 | Answered: 0

Question No. 1

A car is moving with 120 km/h for 20 min and then took a rest for 20 min. The car then continues with 90 km/h for 20 min. The average speed for this journey is approximately:

- 70 km/h
- 120 km/h
- 105 km/h
- 90 km/h



Question No. 7

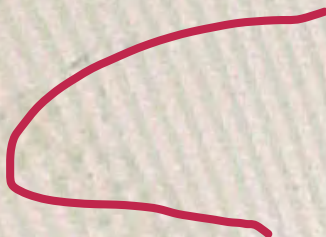
A force is applied on an object and the object did not move. The opposing friction is called.

- internal friction
- static friction
- kinetic friction
- dynamic friction

B

Heat is a form of:

- Displacement
- Force
- energy
- Power



Question No. 11

How many mega-joules of heat must be given off by 5.0 kg of water (specific heat = $4190 \text{ J/kg} \cdot ^\circ\text{C}$) to cool from 75 to 10 $^\circ\text{C}$?

- 3.40 MJ
- 1.36 MJ
- 7.23 MJ
- 4.53 MJ

$$Q = cm\Delta T$$

B

Question No. 22

A 5-N object is freely falling from a height of 20 m. Its kinetic energy after it falls 90% of its initial height is:

- 10 J
- 75 J
- 90 J
- 25 J

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Question No. 15

Temperature scales that give the same temperature difference ΔT are the:

- Kelvin and Celsius
- Celsius and Fahrenheit
- Fahrenheit and Kelvin
- Celsius and Joule

A

Total questions in exam: 25 | Answered: 15

Question No. 20

The power developed to raise a 1000-kg steel wrecking ball to a height of 20 m in 10 s is

- 20 kW
- 40 kW
- 30 kW
- 50 kW

A

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Total questions in exam: 25 | Answered: 0

Question No. 3

If the kinetic energy of a 2-kg object is 1 J, its speed is:

- 4 m/s
- 3 m/s
- 2 m/s
- 1 m/s

D

Save & Next

Total questions in exam: 25 | Answered: 5

Question No. 6

A 5-N object is freely falling from a height of 20 m. Its speed after it loses 90% of its initial potential energy is approximately:

- 27 m/s
- 10 m/s
- 90 m/s
- 19 m/s

D

Question No. 20

In the Fahrenheit temperature scale, water boils at:

- 100 °F
- 373 °F
- 273 °F
- 212 °F

D

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HP Compaq (E171)

Question No. 20

A temperature difference of 100 degrees Celsius is equivalent to a temperature difference of 180 degrees Fahrenheit. This means that a temperature difference of 30 degrees Fahrenheit is equivalent to:

- 36.7 degrees Celsius
- 26.7 degrees Celsius
- 46.7 degrees Celsius
- 16.7 degrees Celsius

D

Question No. 16

The power needed to speed up a 1000-kg car from zero km/h to 108 km/h in 10 s

- 45 kW
- 75 kW
- 55 kW
- 65 kW

A

Save & Next

Question No. 14

The gravitational potential energy of an object is related to its mass is as follows:

- The potential energy does not depend on the mass
- The larger the mass the larger the potential energy
- The larger the mass the smaller the potential energy
- The potential energy depends on the square of the mass

B

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Question No. 8

Converting -40°F to Celsius gives:

- -60°C
- 50°C
- -40°C
- 30°C

Save & Next
حفظ و التالي

Total questions in exam: 25 | Answered: 10

Question No. 25

When a falling object is in non-free fall,:

- it must have a small volume.
- air resistance is considered.
- it must have a small mass.
- its acceleration is equal to that due to gravity.

B

Question No. 12

If an object is falling with an acceleration that is less than the acceleration due to g

- must have big inertia
- must have a small mass
- is freely falling.
- is non-freely falling.

D

Save & Next حفظ و التالي

Question No. 19

How long would it take a 1500-W motor to raise a 100-kg mass to a height of 15 m?

- 40 s
- 30 s
- 10 s
- 20 s



Question No. 25

Which of the following temperatures is NOT possible?

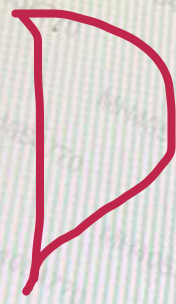
- 200 °C
- 278 °C
- 274 °F
- 4500 °C

B

Question No. 18

An object is thrown vertically upward. During its journey downward, the speed is. (neglect air resistance)

- constant
- zero
- decreasing
- increasing



Save & Next حفظ و التالي

Question No. 7

A 1500-kg car accelerates at 5 m/s/s, the net force on the car is:

- 1000 N
- 8000 N
- 7500 N
- 1250 N

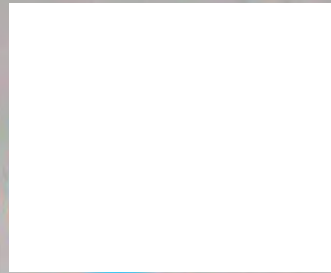


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Question No. 4

In the Celsius temperature scale, water boils at:

- 373 °C
- 273 °C
- 100 °C
- 212 °C

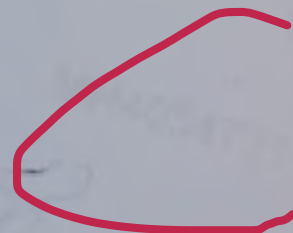


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Question No. 14

A temperature difference of 100 degrees Celsius is equivalent to a temperature difference of 180 degrees Fahrenheit. This means that a temperature difference of 5 degrees Celsius is equivalent to:

- 5 degrees Fahrenheit
- 18 degrees Fahrenheit
- 9 degrees Fahrenheit
- 20 degrees Fahrenheit



Total questions in exam: 25 | Answered: 5

Question No. 12

A car is moving with 65 km/h for 1 hour and then took a rest for 30 min. The car then continues with 130 km/h for 30 min. The average speed for the journey is approximately:

- 110 km/h
- 65 km/h
- 85 km/h
- 120 km/h

B

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Total questions in exam: 25 | Answered: 0

Question No. 2

When you fire a bullet (مطلقة) from a handgun, the recoil (الارتداد) you feel is called the

- normal to the reaction
- normal to the action
- action
- reaction



Question No. 8

For a moving car, if the forward force of its engine is 10000 N, air resistance on it is 6000 N, and the force of friction on it is 4000 N, the car will:

- have changing acceleration
- have zero acceleration
- slow down
- accelerate forward

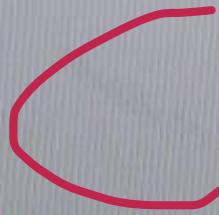
B

Total questions in exam 25 | Answered: 0

Question No. 18

A 1500-kg car accelerates from 12 km/h to 120 km/h in 10 seconds. The net force ($F = ma$) on the car is (1m/s

- 2500 N
- 3500 N
- 4500 N
- 3000 N

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Question No. 23

The coefficient of friction is always:

- dimensionless
- more than 1
- less than 1
- negative

A

Question No. 14

When we heat a block of iron, the iron atoms:

- vibrate faster
- stop moving
- vibrate slower
- increase in number

A

Question No. 17

The unit (N.m) is a unit of:

- work
- power
- acceleration
- force

A

Question No. 20

If a man pushes a 100-kg box with a 100-N force on a level floor and the box moves with constant velocity, the force of friction on the box is:

- 50 N
- 10 N
- 1 N
- 100 N

Number of questions: 20

0 Answered
5 Not Visited

1	2	3	4
8	9	10	11
15	16	17	18
22	23	24	25

D

Question No. 16

A net force of 6000 N causes a car to accelerate at 4 m/s/s. The mass of the car is:

- 1500 kg
- 24000 kg
- 6000 kg
- 15000 kg

A

Question No. 11

A painter weighing 630 N climbs to a height of 5 m on a ladder. What is the increase in gravitational potential energy of the painter?

- 31.5 J
- 3.15 kJ
- 31.5 kJ
- 3.15 J

B

Number of
Number of

5
12

1
8
15
22

Question No. 9

The maximum static friction is always _____ kinetic friction.

- smaller than
- quarter the
- greater than
- half the



Question No. 21

A temperature of 300 K equals:

- 512 °C
- 27 °C
- 37 °C
- 573 °C

B

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Question No. 22

"A moving object likes to keep its state of motion" is the meaning of.

- inertia
- force
- acceleration
- velocity

A

Question No. 24

4850 cal of heat is equivalent to:

- 33.5 kJ
- 31.7 kJ
- 11.2 kJ
- 20.3 kJ

D

Total questions in exam: 25 | Answered: 8

Question No. 25

An object travels in straight line and increases its speed uniformly from 10 m/s to 30 m/s after covering 100 m. Its acceleration is:

- 0.25 m/s/s
- 4 m/s/s
- 1 m/s/s
- 2 m/s/s

B

Question No. 21

The force that can make a 100-kg crate accelerate at 0.8 m/s^2 is:

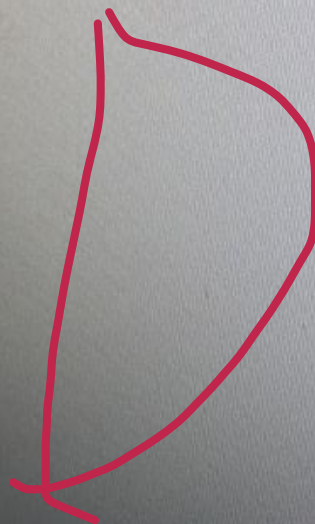
- 10 N
- 80 N
- 50 N
- 125 N

B

Question No. 22

The human body average temperature is 37°C . What is it in $^{\circ}\text{F}$?

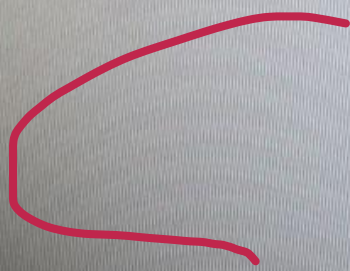
- 82.7 $^{\circ}\text{F}$
- 73.1 $^{\circ}\text{F}$
- 65.5 $^{\circ}\text{F}$
- 98.6 $^{\circ}\text{F}$



Question No. 16

Which of these have the same units?

- potential energy, kinetic energy and power
- potential energy, kinetic energy and temperature
- potential energy, kinetic energy and work
- potential energy, kinetic energy and density



Question No. 13

A constant force F is making an angle 25° with the direction of motion of an object. If the distance moved is 100 m and the work done on the object is 1820 J, the force F is:

- 10 N
- 30 N
- 20 N
- 40 N



Question No. 8

5-kg of a liquid absorb an amount of heat $Q = 200$ kcal, raising its temperature by $\Delta T = 40^\circ\text{C}$. The specific heat c of this liquid is:

- $c = 0.5$ kcal/kg. $^\circ\text{C}$
- $c = 1$ kcal/kg. $^\circ\text{C}$
- $c = 0.3$ kcal/kg. $^\circ\text{C}$
- $c = 0.1$ kcal/kg. $^\circ\text{C}$

B

Question No. 9

Two forces 10 N and 25 N act in the same direction on 5-kg mass. The acceleration is:

- 7 m/s/s
- 1 m/s/s
- 5 m/s/s
- 3 m/s/s

A

Question No. 11

A 10-kg of a substance absorbs 173 kcal of heat and its temperature rises from zero to 150 °C. What is the specific heat c of this substance?

- $c = 0.115 \text{ kcal/kg}\cdot^\circ\text{C}$
- $c = 0.515 \text{ kcal/kg}\cdot^\circ\text{C}$
- $c = 0.315 \text{ kcal/kg}\cdot^\circ\text{C}$
- $c = 0.715 \text{ kcal/kg}\cdot^\circ\text{C}$

A

Newton's third law states that for a force (1) applied from object A on object B, there is a force (2) applied from B on A such that:

- forces (1) and (2) are equals in magnitude
- force (1) is more than force (2)
- force (1) is less than force (2)
- forces (1) and (2) are perpendicular



A

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Question No. 9

You raised a 10-kg object to a height of 2 m, and your friend raised a 30-kg object to the same height. The work done

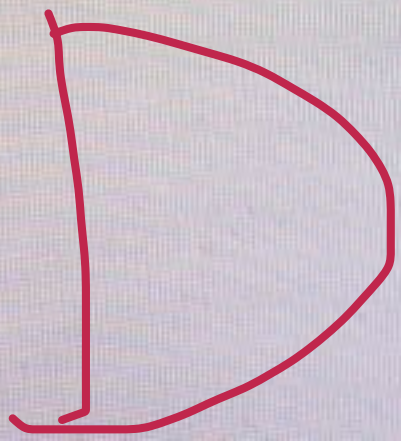
- double your work
- three times your work
- half your work
- same as your work

B

Question No. 10

A freight elevator with operator weighs 4000 N. If it is raised to a height of 20 m in 10 s, how much power is developed?

- 20 W
- 80 kW
- 200 W
- 8 kW

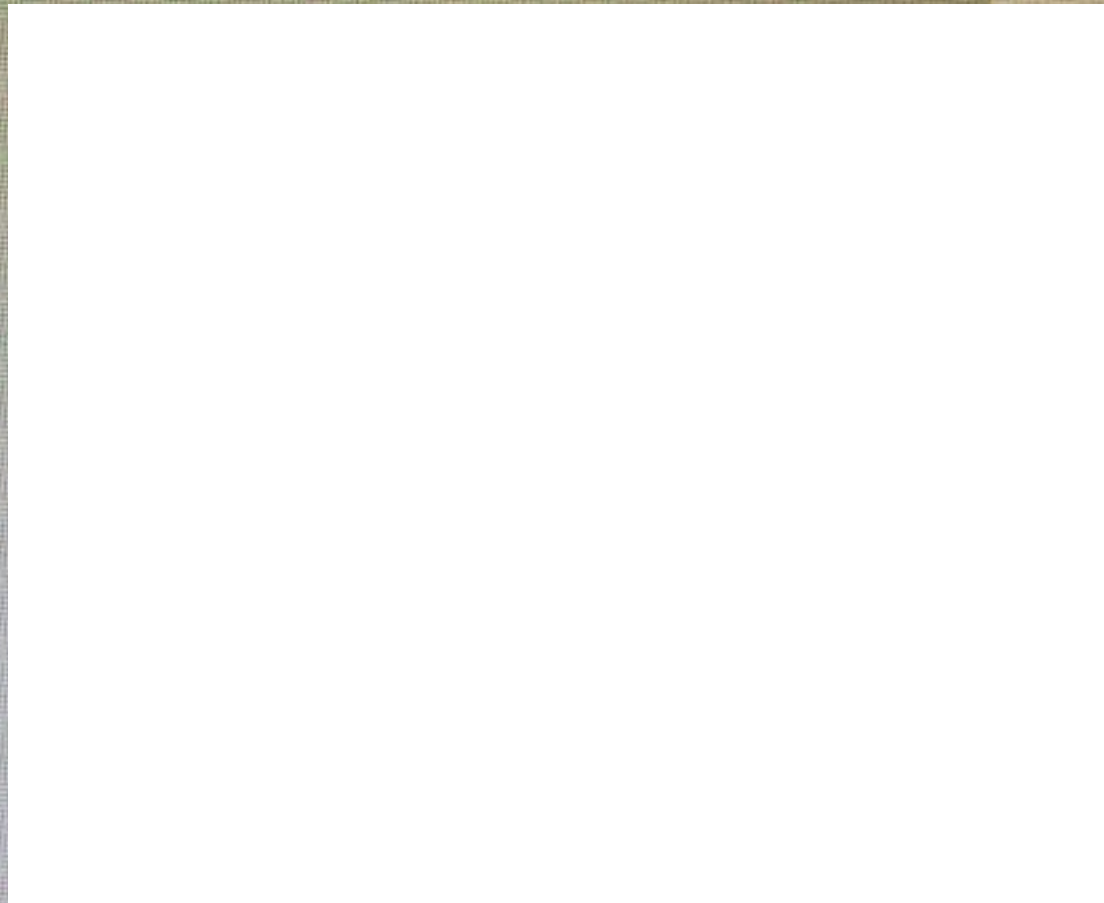


Question No. 11

A temperature of 30°C equals:

- 30 $^{\circ}\text{F}$
- 2 $^{\circ}\text{F}$
- 303 $^{\circ}\text{F}$
- 86 $^{\circ}\text{F}$

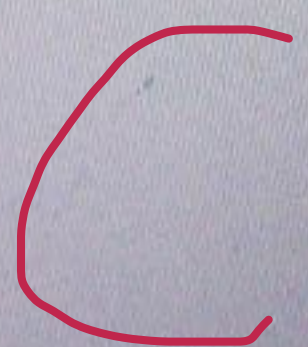
D



Question No. 12

In the Celsius temperature scale, water freezes at

- 212 °C
- 32 °C
- 0 °C
- 273 °C



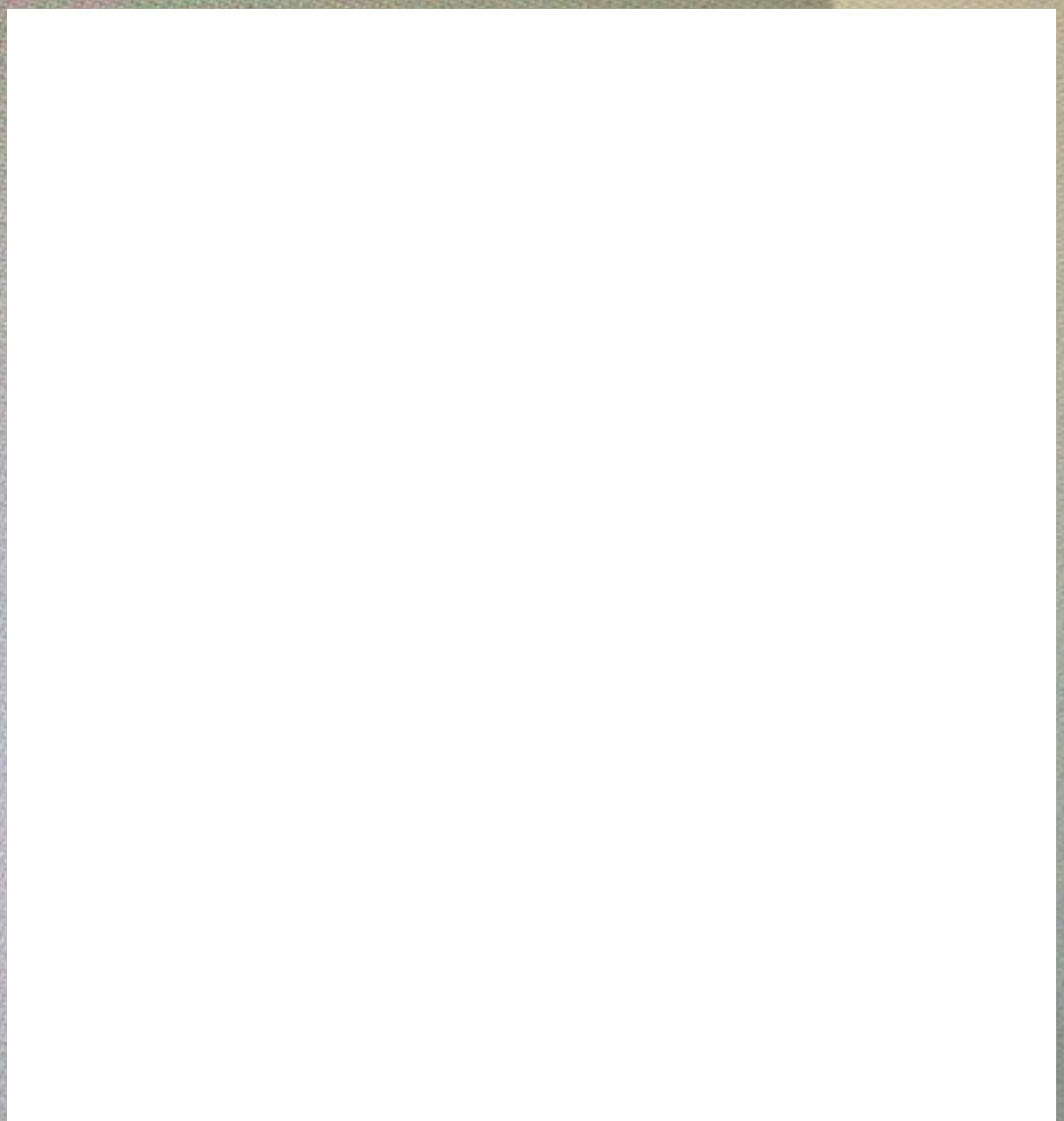
3

Question No. 5

The weight of a 100-g apple is nearly

- 0.1 kg
- 1 kg
- 0.1 N
- 1 N

D

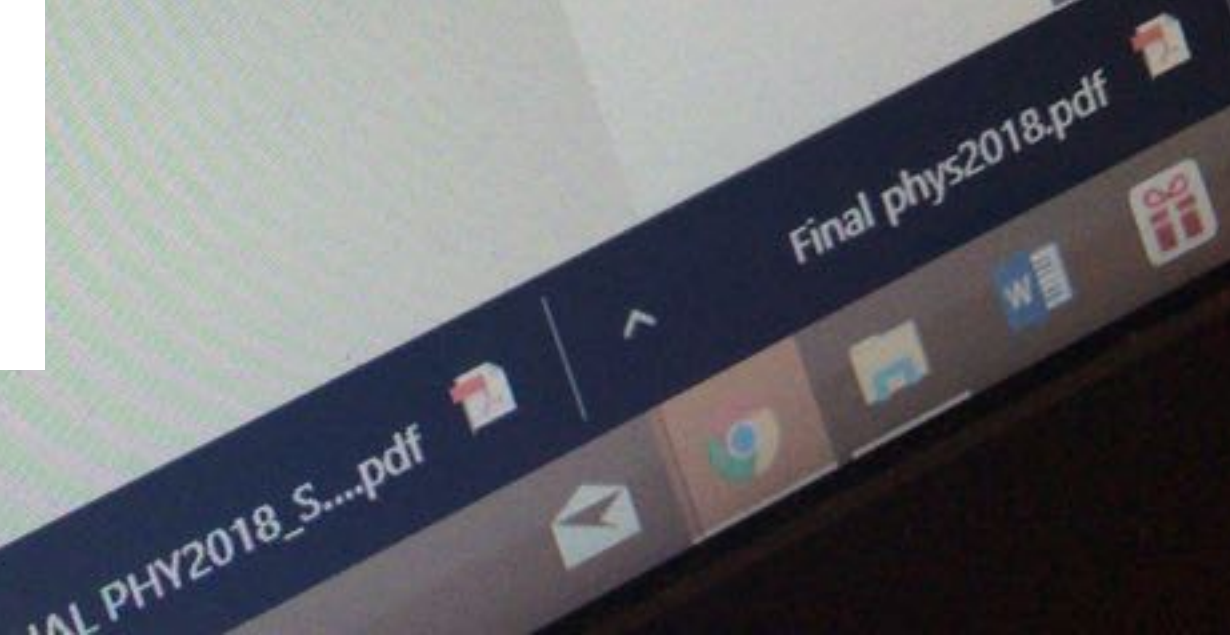


Question No. 3

As an object is freely falling its acceleration is:

- constant but not zero.
- zero.
- decreasing.
- increasing.

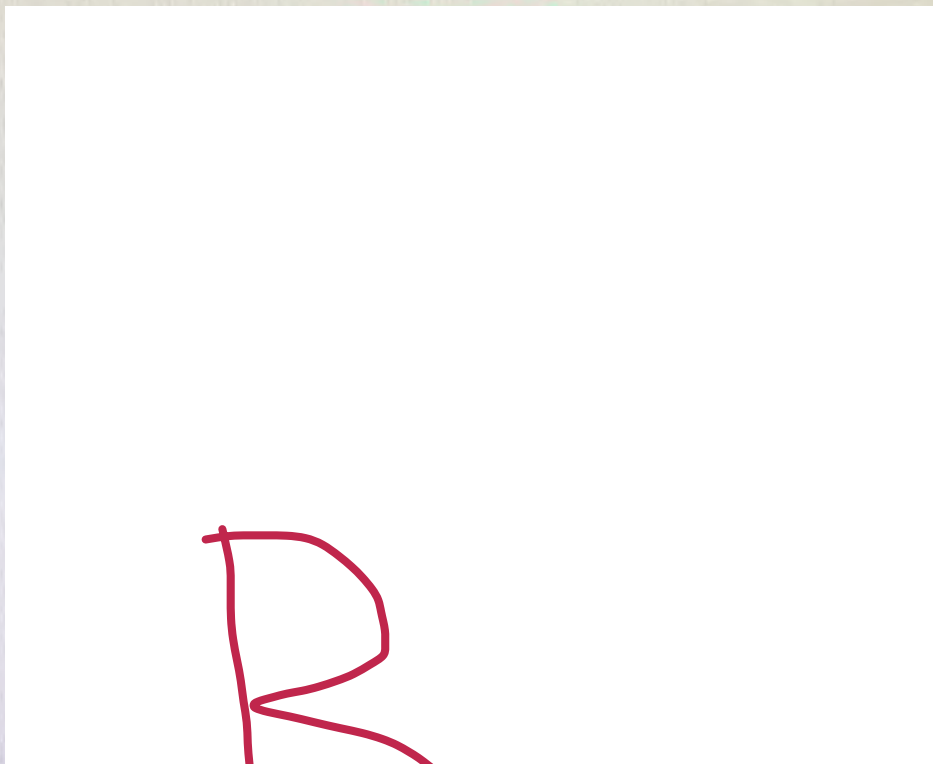
A



Question No. 15

How much heat Q must be absorbed by 10 kg of steel (specific heat = $0.115 \text{ kcal/kg}^\circ\text{C}$) to heat it from zero to 150°C ?

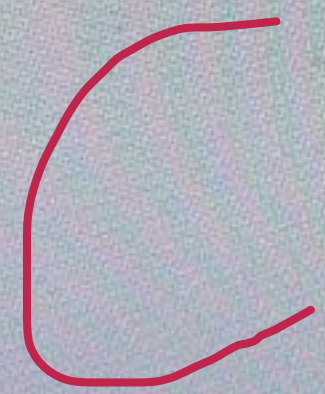
- 751 kcal
- 173 kcal
- 71 kcal
- 107 kcal



Question No. 17

How many kilo-joules of heat Q must be given off by 15 kg of iron (specific heat = $481 \text{ J/kg}^\circ\text{C}$) to cool from 105 to 55°C ?

- 111 kJ
- 17 kJ
- 361 kJ
- 23 kJ

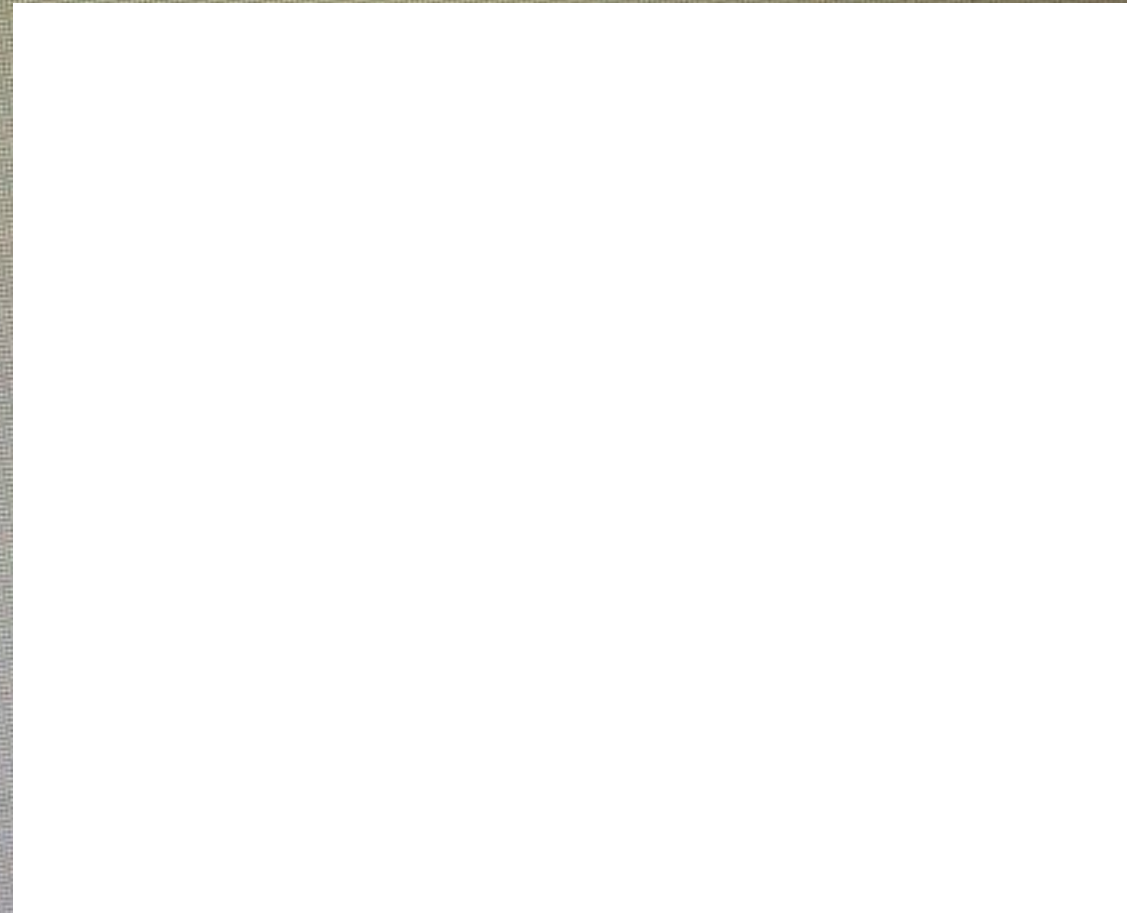


Question No. 18

Vaporization is the change of phase from

- gas to liquid
- solid to liquid
- liquid to solid
- liquid to gas

D



Question No. 20

Fusion is the change of phase from

- liquid to gas
- solid to liquid
- gas to liquid
- liquid to solid

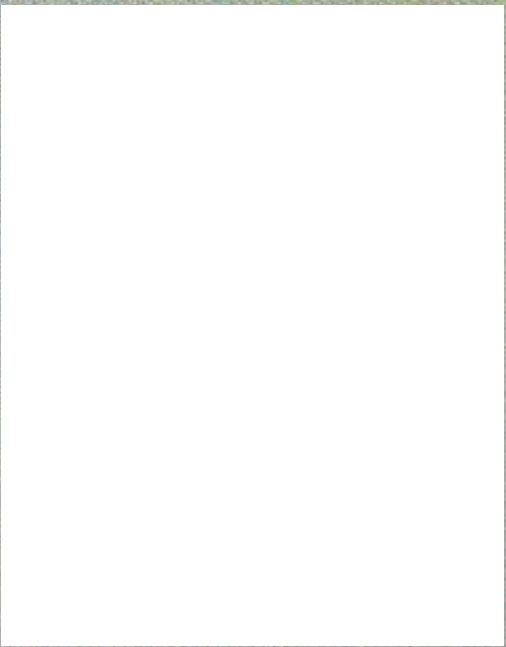
B

Question No. 21

A substance should lose heat to change from

- liquid to solid
- solid to gas
- solid to liquid
- liquid to gas

A

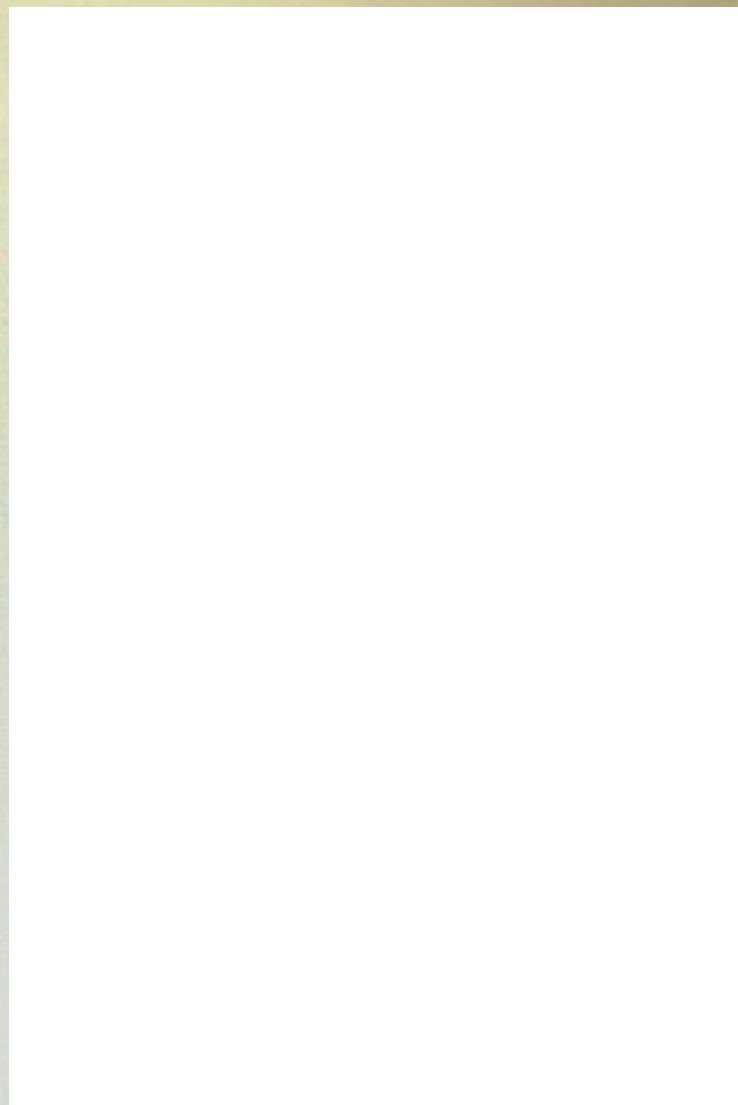


Question No. 21

During change of phase of a substance, its temperature

- increases
- remains constant
- changes up and down
- decreases

B

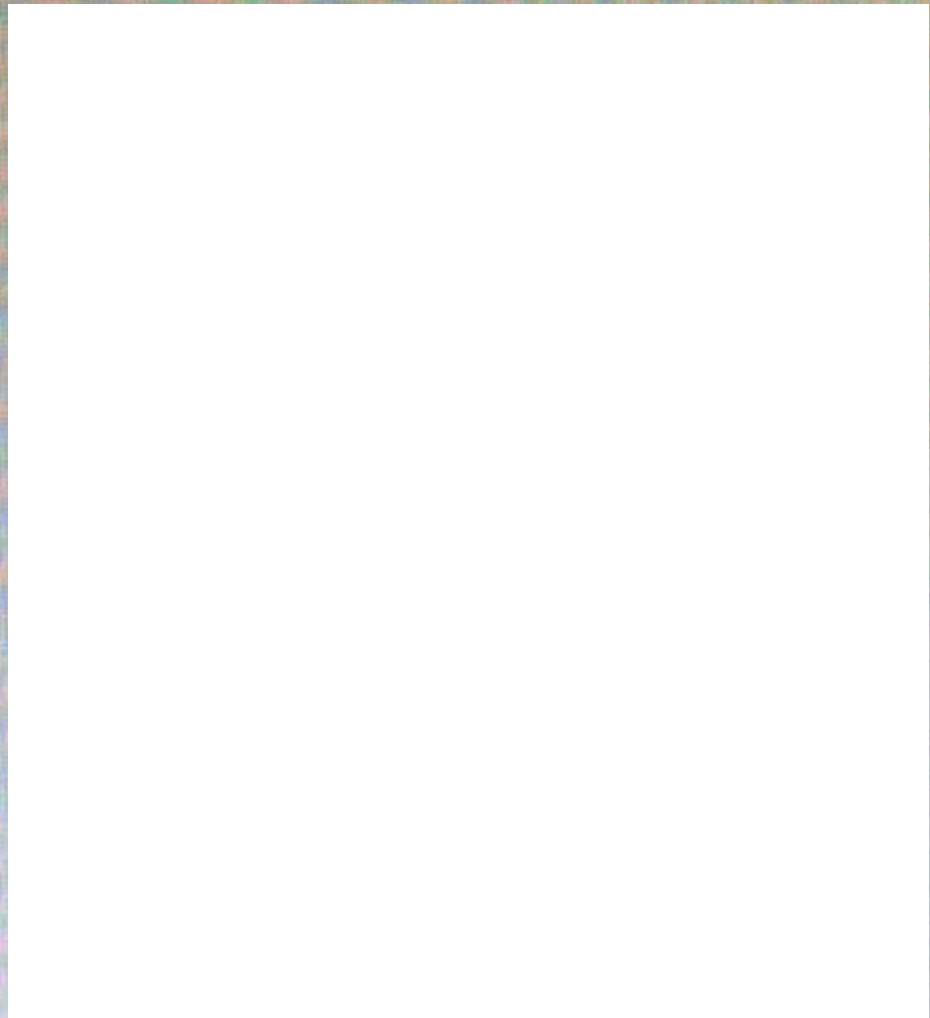


Question No. 3

If a stone drops in a free fall from the edge of a mountain, how long does it take to fall 125 m: (use $g = 10 \text{ m/s}^2$)

- 10 s
- 5 s
- 25 s
- 15 s

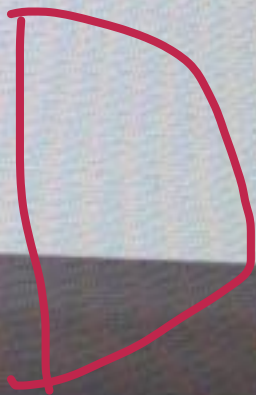
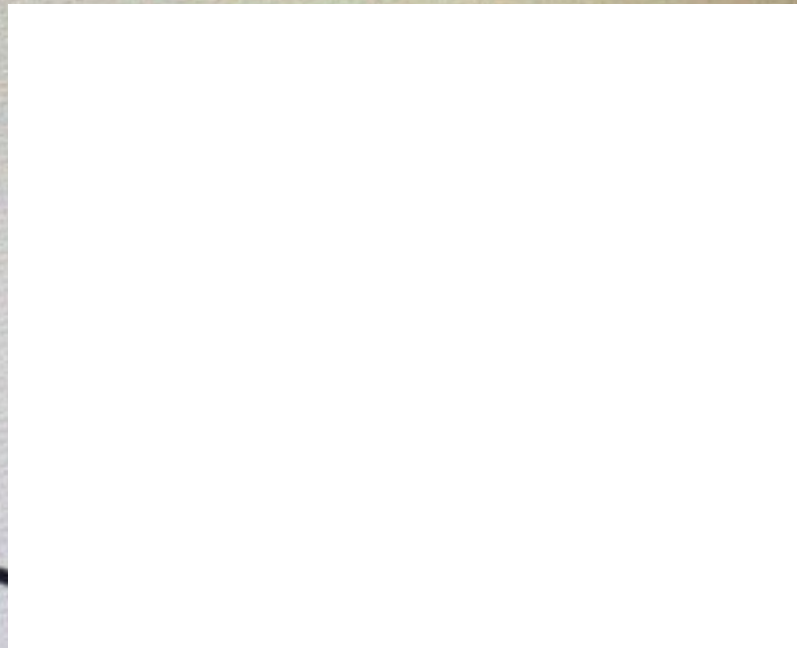
B



Question No. 8

The kinetic energy of an object is due to its

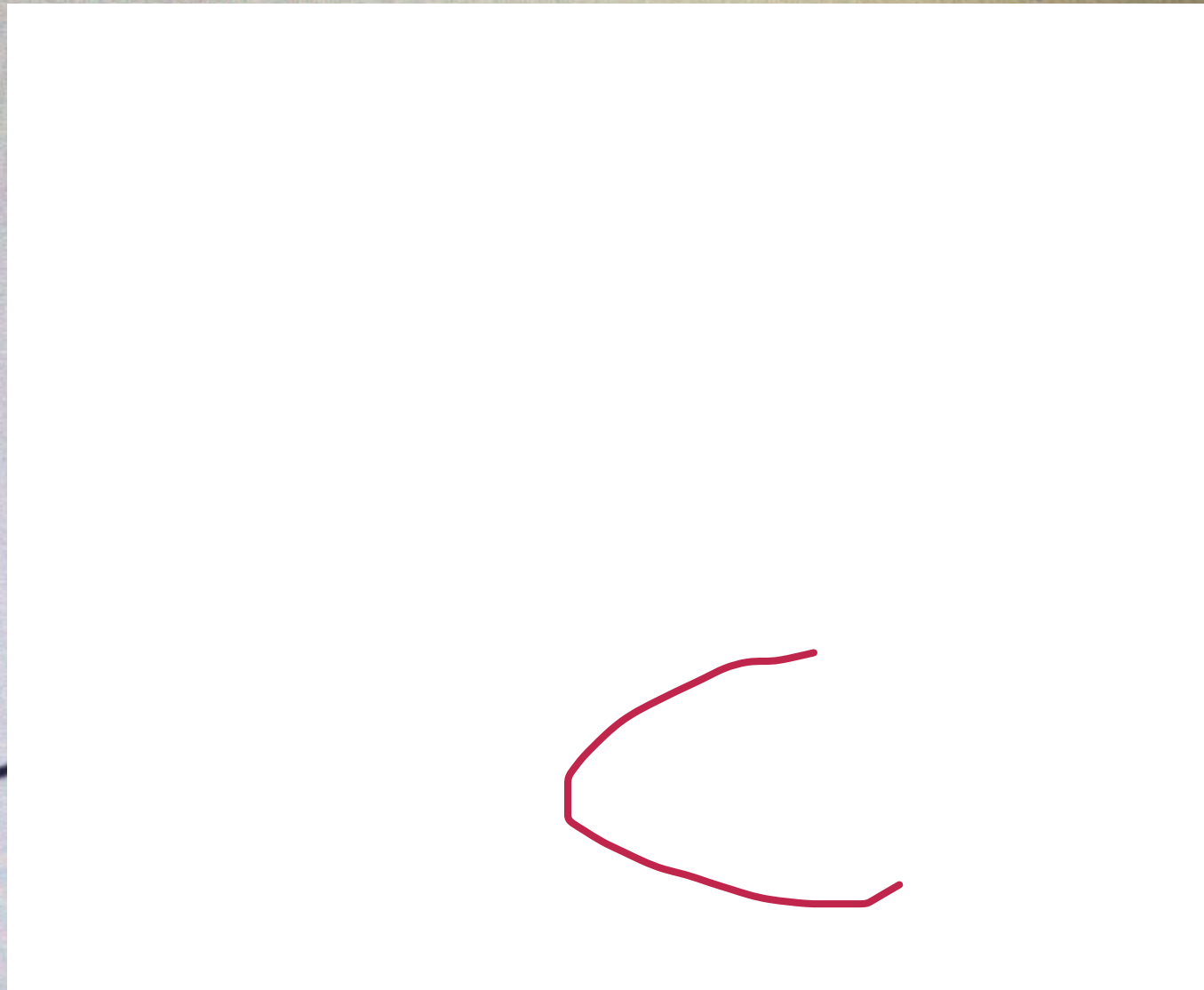
- colour
- position
- area
- motion



Question No. 10

A 400-kg concrete beam is to be raised 30 m in 30 s. How many kilowatts of power are needed?

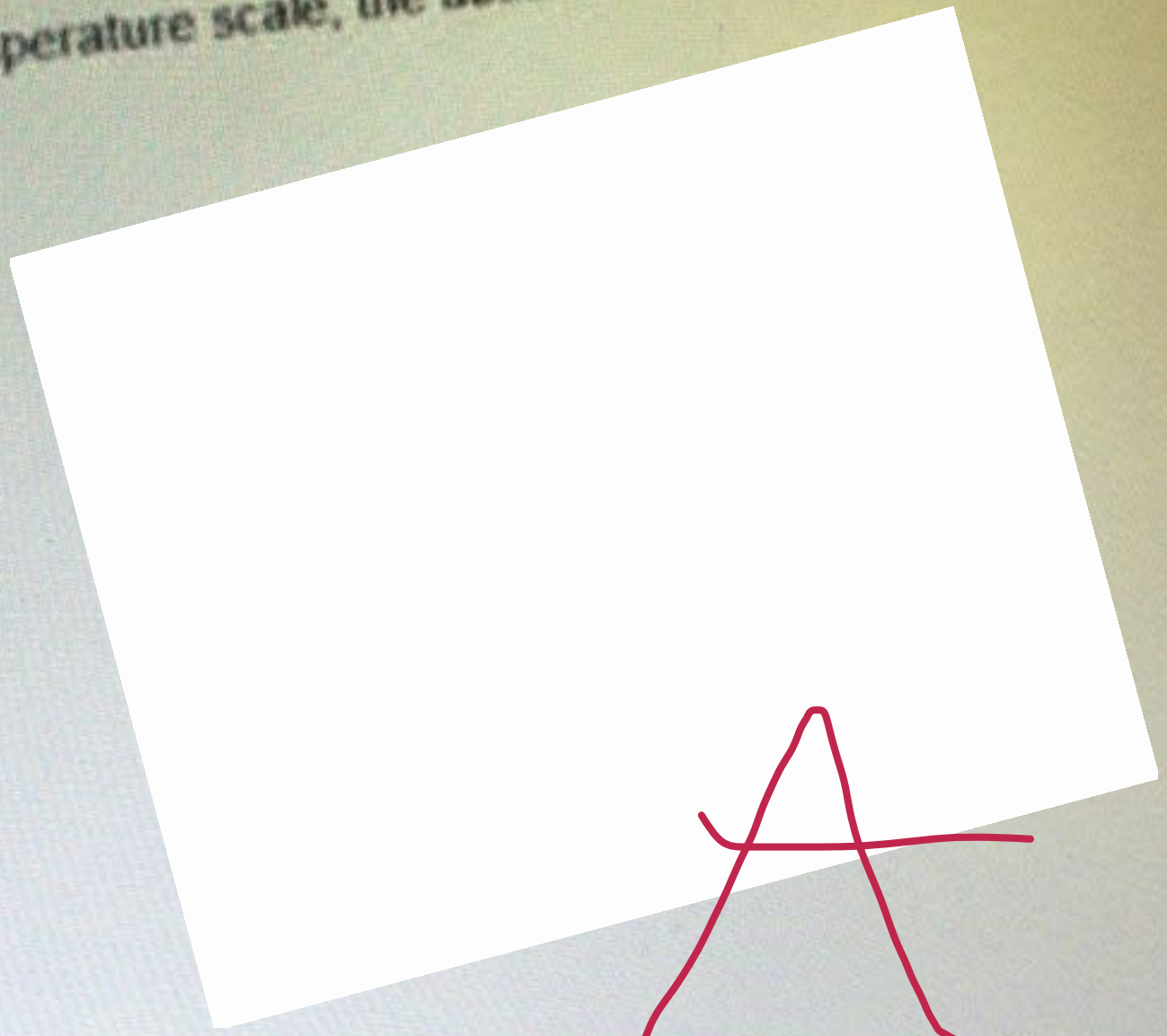
- 1 kW
- 2 kW
- 4 kW
- 3 kW



Question No. 14

In the Fahrenheit temperature scale, the absolute zero (0 K) is approximately at:

- 460 °F
- 273 °F
- 0 °F
- 273 °F



A



Question No. 11

In the Fahrenheit temperature scale, water boils at:

- 273 °F
- 373 °F
- 100 °F
- 212 °F

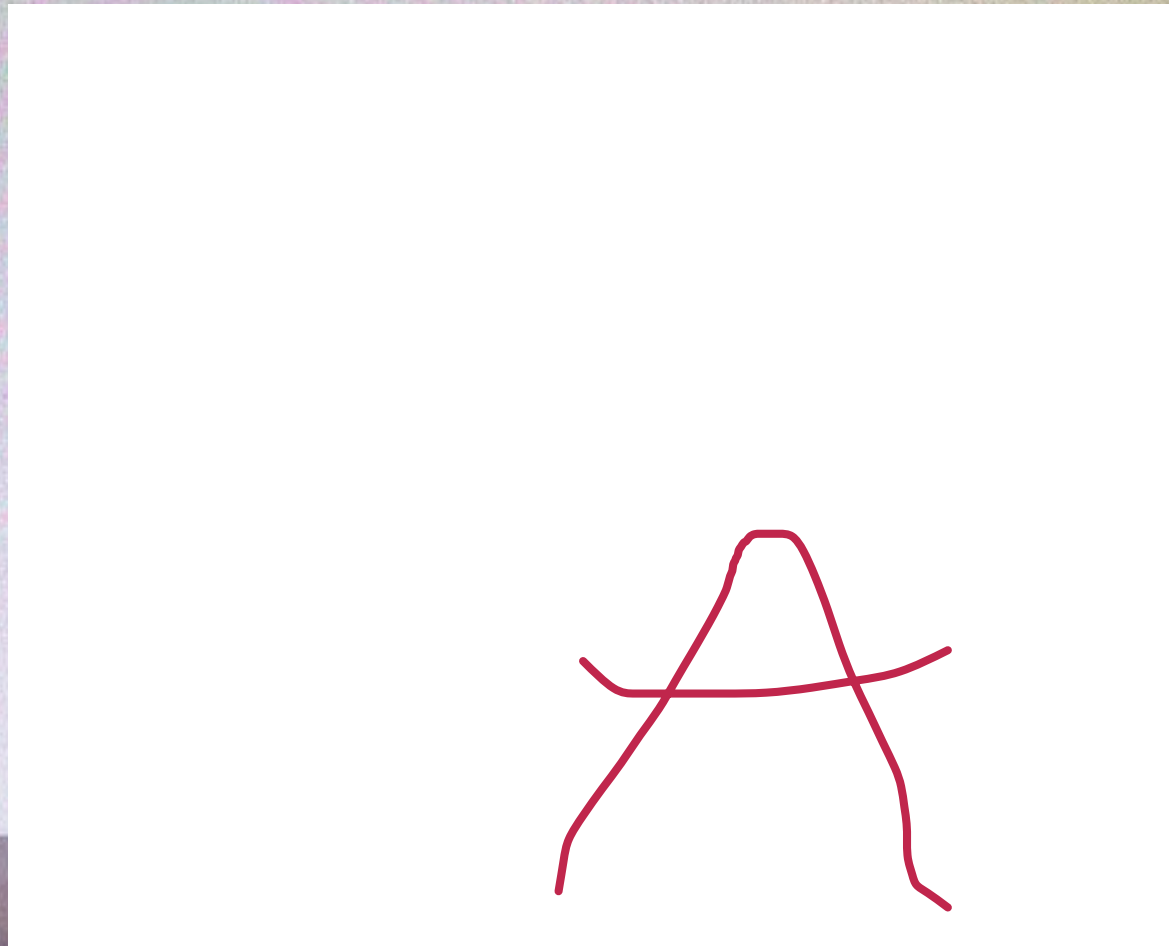


D

Question No. 18

The heat of vaporization of a substance is the heat that 1kg of that substance needs to

- vaporize
- melt
- solidify
- freeze



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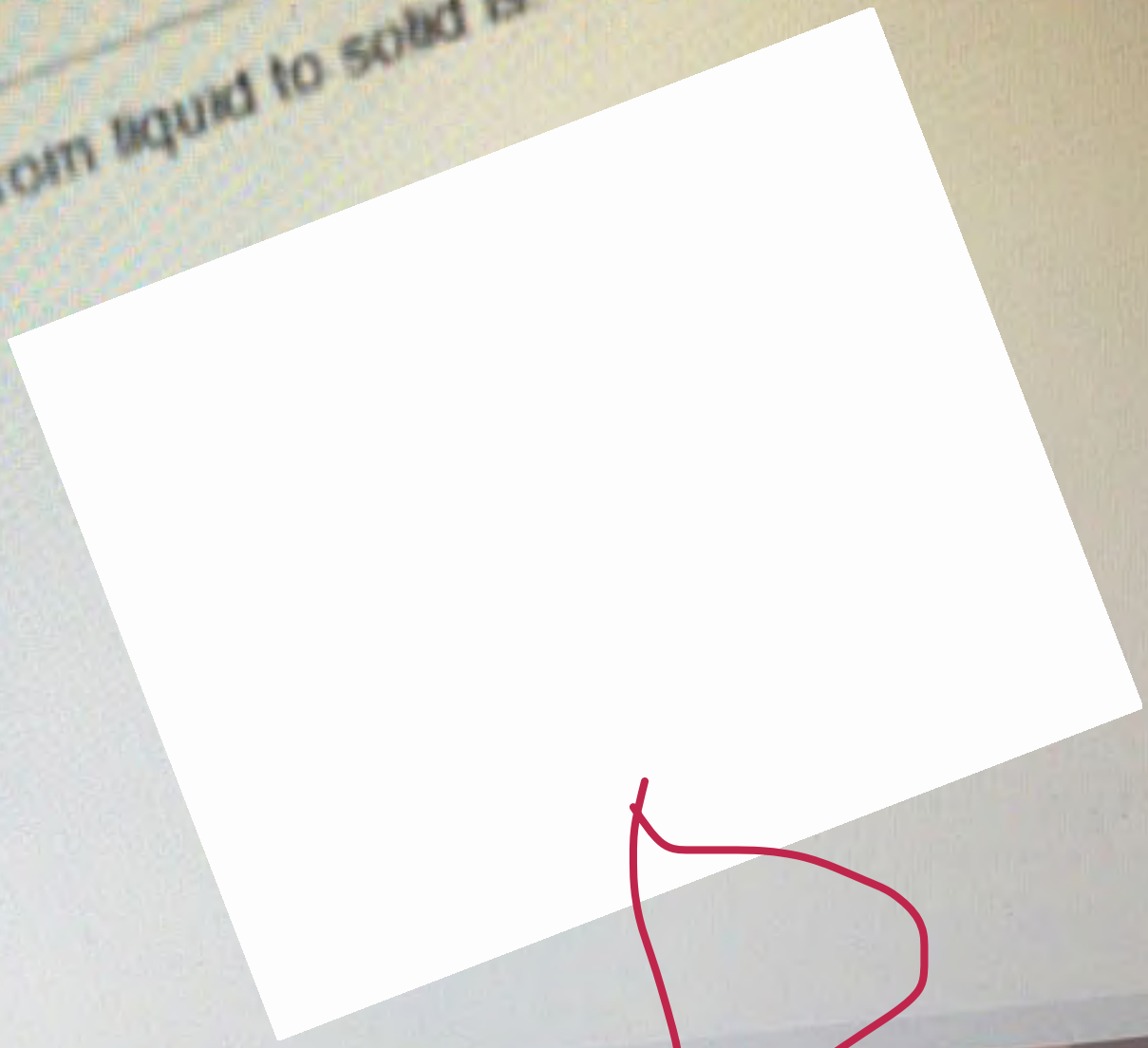
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Question No. 19

The change of phase from liquid to solid is:

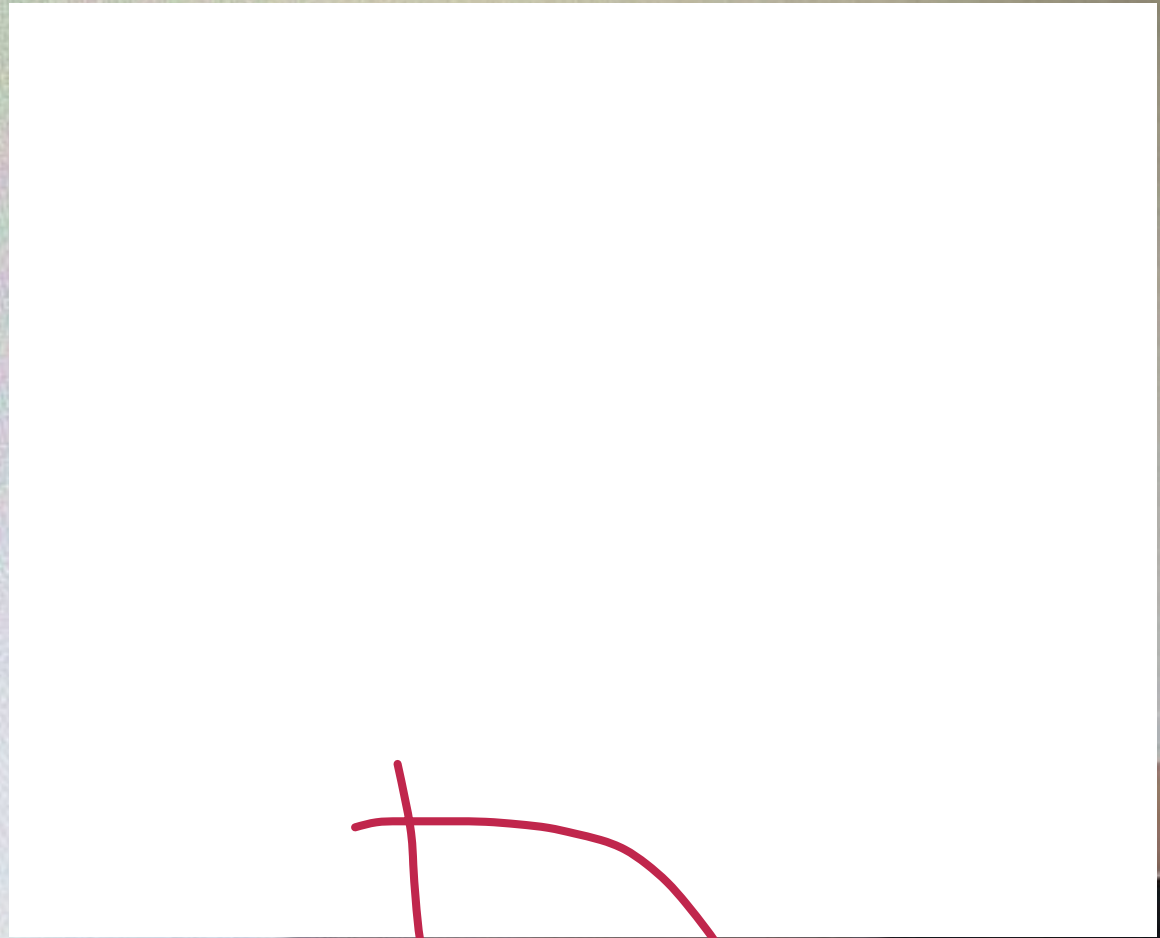
- melting
- solidification
- condensation
- vaporization



Question No. 3

For non-freely falling objects, terminal velocity means:

- big mass.
- zero velocity
- small mass.
- zero acceleration.



Question No. 6

A wrecking ball of mass 200 kg is raised 6 m above the ground. What is the potential energy of the ball?

- 1.2 kJ
- 0.12 kJ
- 120 kJ
- 12 kJ

D

Question No. 7

The law of conservation of mechanical energy when no resistant forces do work says:

- kinetic energy = the potential energy
- kinetic energy + the potential energy = power
- (kinetic energy + the potential energy) is not constant
- kinetic energy + the potential energy = constant

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Question No. 5

A man has a mass of 80 kg on the Moon. His mass on the Earth is:

- M = 13.3 kg
- M < 80 kg
- M > 80 kg
- M = 80 kg

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Question No. 3

At the moment when a non-freely falling object reaches terminal speed, the air resistance is

- smaller than the object's weight.
- zero.
- equal to the object's weight.
- greater than the object's weight.



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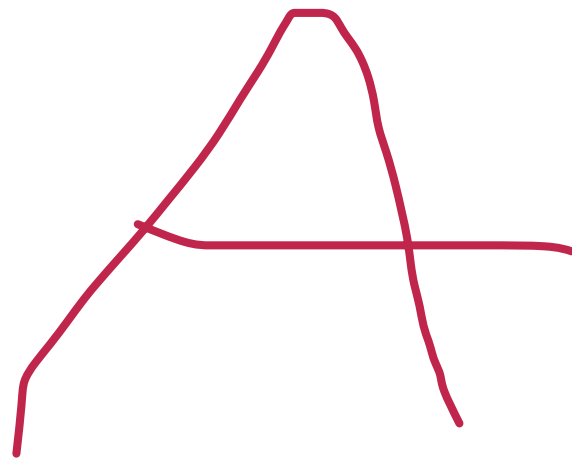


ASUS

Question No. 10

A car engine can develop 160 horsepower (hp), which is equivalent to:
(1 hp = 0.75 kW)

- 120 kW
- 90 kW
- 160 kW
- 213 kW



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Question No. 19

The heat of fusion of a substance is the heat that 1kg of that substance needs to

- vaponze
- condense
- melt
- heat up



Question No. 29

The repulsive force between two identical 1-mC charges separated by 300 m is:

- 100 N
- 0.1 N
- 1 N
- 10 N

B

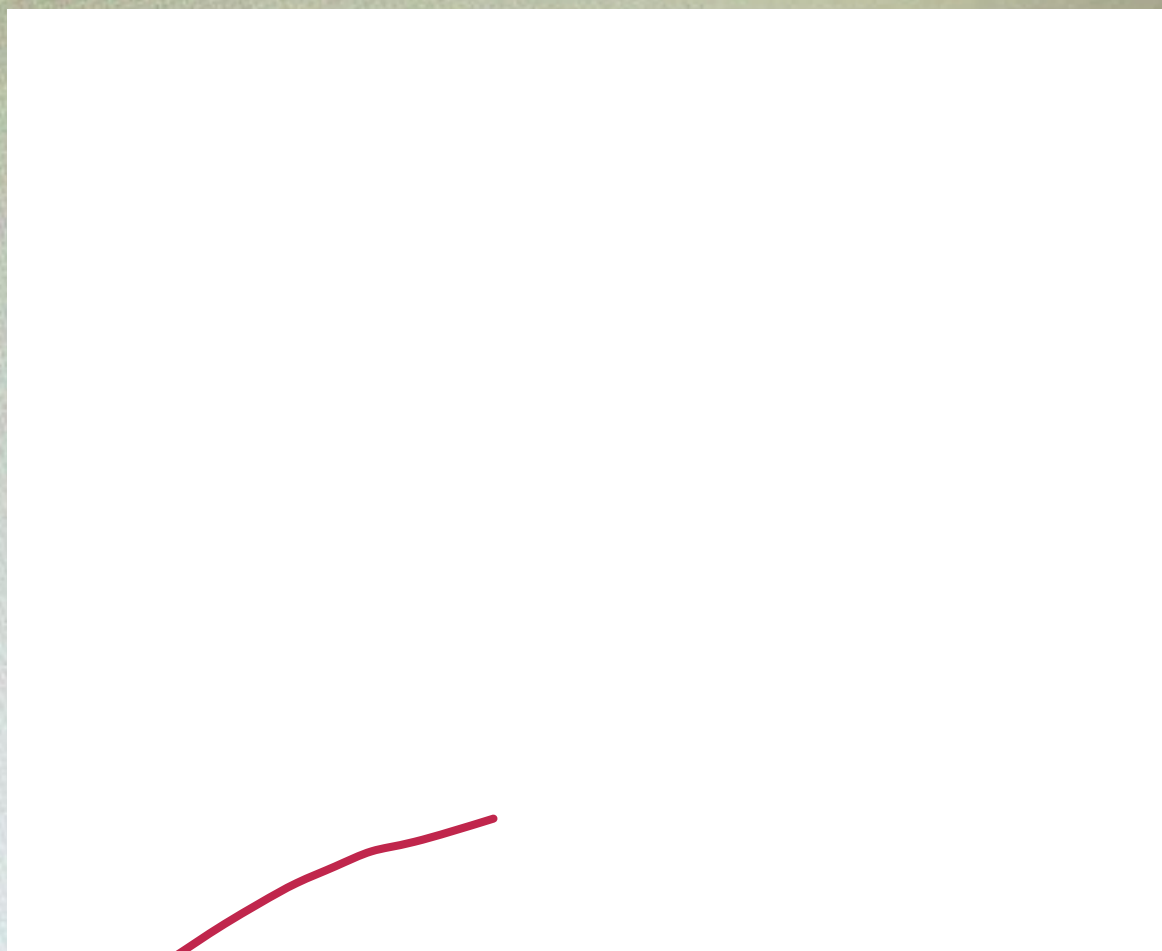
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Question No. 21

A substance should absorb heat to change from

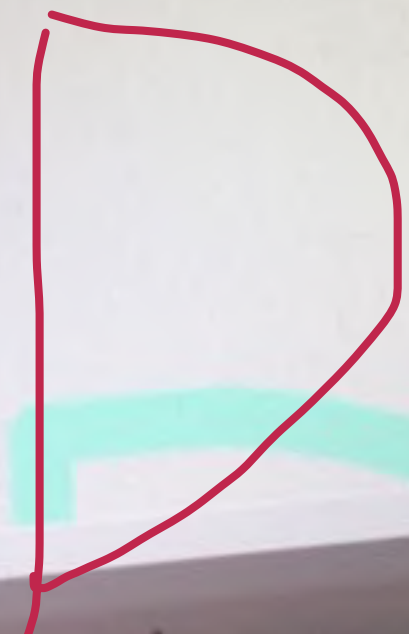
- gas to liquid
- gas to solid
- liquid to gas
- liquid to solid



Question No. 6

A large boulder at rest on top of a hill possesses

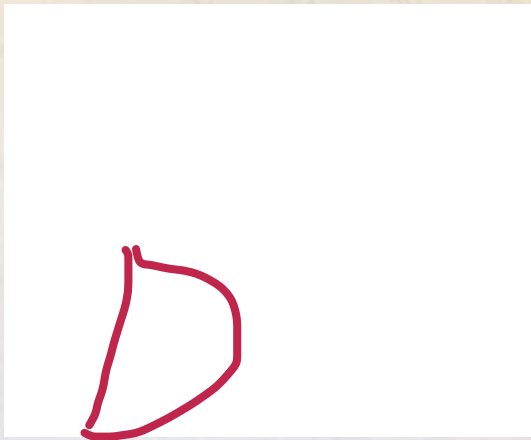
- both potential and kinetic energy
- kinetic energy
- no energy
- potential energy



Question No. 18

A car is moving with 85 km/h for an hour and then took a rest for 30 min. The car then continues with 50 km/h for 30 min. The average speed for journey is approximately

- 85 km/h
- 65 km/h
- 75 km/h
- 55 km/h



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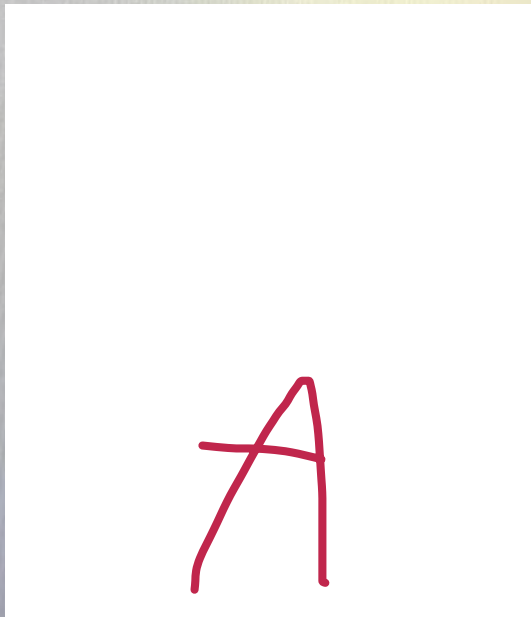


Total questions in exam: 25 | Answered: 0

Question No. 1

A car is moving with 72 km/h for 40 min and then took a rest for 20 min. The car then continues with 120 km/h for two hours. This journey is approximately:

- 96 km/h
- 100 km/h
- 110 km/h
- 75 km/h



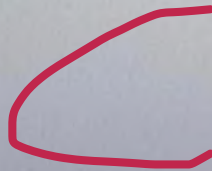
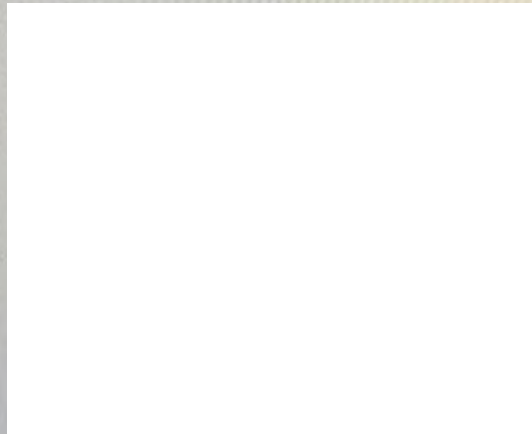


Total questions in exam: 25 | Answered: 0

Question No. 6

Temperature is a measure of the _____ an object:

- volume of
- area of
- hotness or coldness of
- color of



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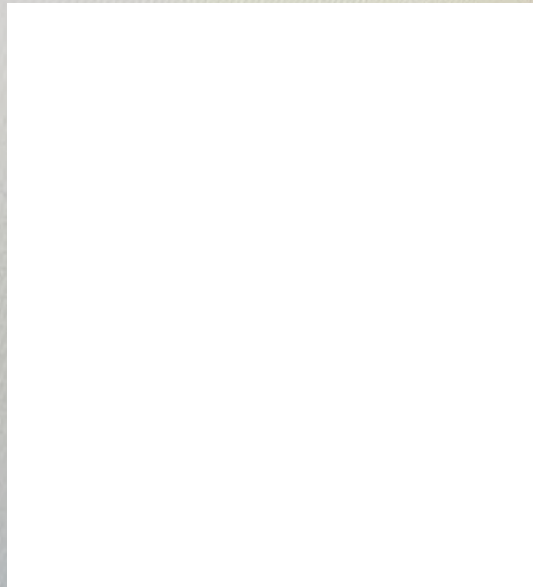


Total questions in exam: 25 | Answered: 0

Question No. 7

The height a 20-kW motor can lift a 1000-kg mass to in 10 seconds is:

- 40 m
- 20 m
- 10 m
- 30 m



B

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Total questions in exam: 25 | Answered: 0

Question No. 9

You applied a horizontal force of 200 N to push a level table but the table remained at rest. The static friction force is:

- 20 kg
- 20 N
- 200 N
- 200 kg



C

Question No. 3

In the Kelvin temperature scale, water freezes at:

- 212 K
- 273 K
- 0 K
- 32 K



B



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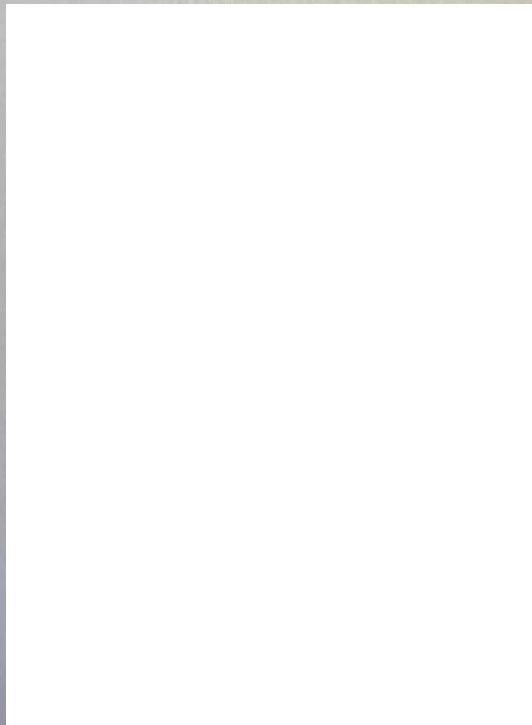
Physics_Quiz2_Sem2_2019

Total questions in exam: 25 | Answered: 0

Question No. 14

A wrecking ball of mass 200 kg is raised 6 m above the ground. What is the potential energy of the ball?

- 12 kJ
- 120 kJ
- 0.12 kJ
- 1.2 kJ



A

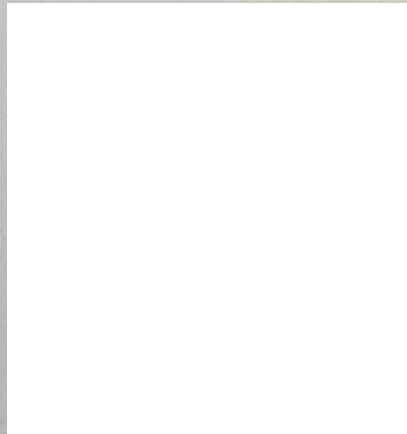


Total questions in exam: 25 | Answered: 0

Question No. 13

When a man pushes on a wall with force 100 N, the wall pushes back on him with force of magnitude:

- 50 N
- 200 N
- 0 N
- 100 N



D

Total questions in exam: 25 | Answered: 0

Question No. 17

The human body average temperature is 98.6 °F. What is it in °C?

- 373 °C
- 40 °C
- 310 °C
- 37 °C

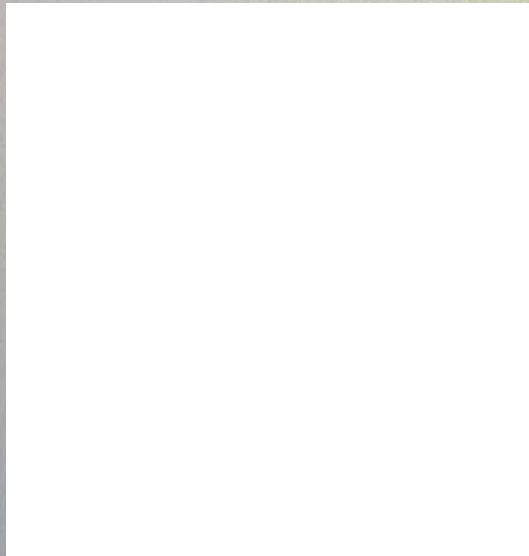
D



Question No. 16

A force of 1000 N is making an angle of 60° with the direction of motion of an object.
If the work done is 500 kJ, the distance moved is:

- 2 km
- 1 km
- 0.5 km
- 1.5 km



B



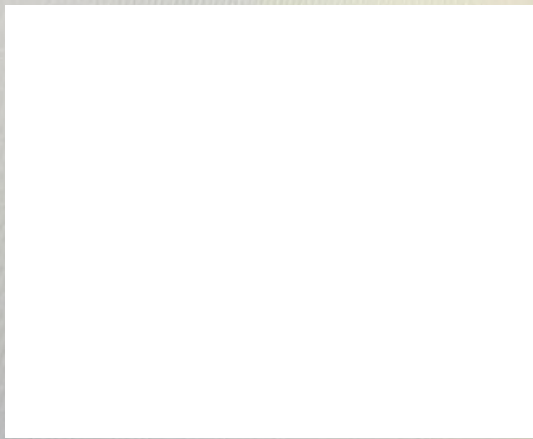
Total questions in exam: 25 | Answered: 0

Question No. 8

How many kilocalories of heat must be added to 10 kg Tungsten to raise its temperature by 230 Fahrenheit?

(The specific heat of Tungsten is $c = 0.134 \text{ J/g} \cdot ^\circ\text{C}$ and $\Delta T_F = 1.8\Delta T_C$.)

- 4.09 kcal
- 409 kcal
- 0.409 kcal
- 40.9 kcal



D



Total questions in exam: 25 | Answered: 0

Question No. 3

In the Fahrenheit temperature scale, water freezes at:

- 32 °F
- 0 °F
- 212 °F
- 273 °F

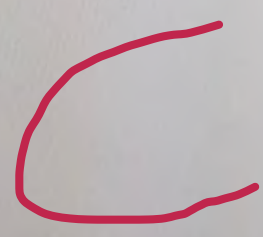
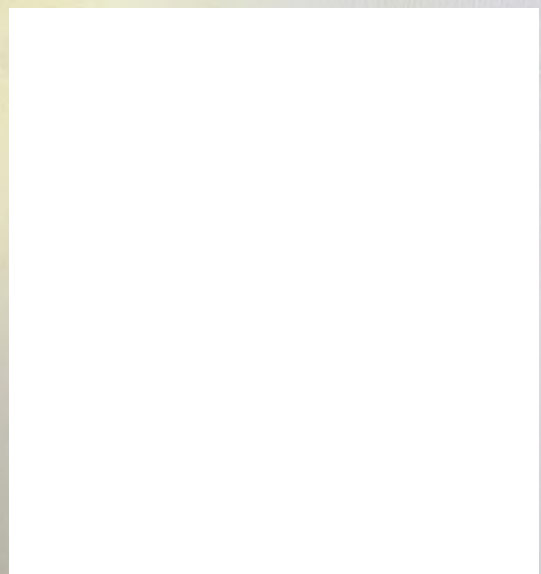
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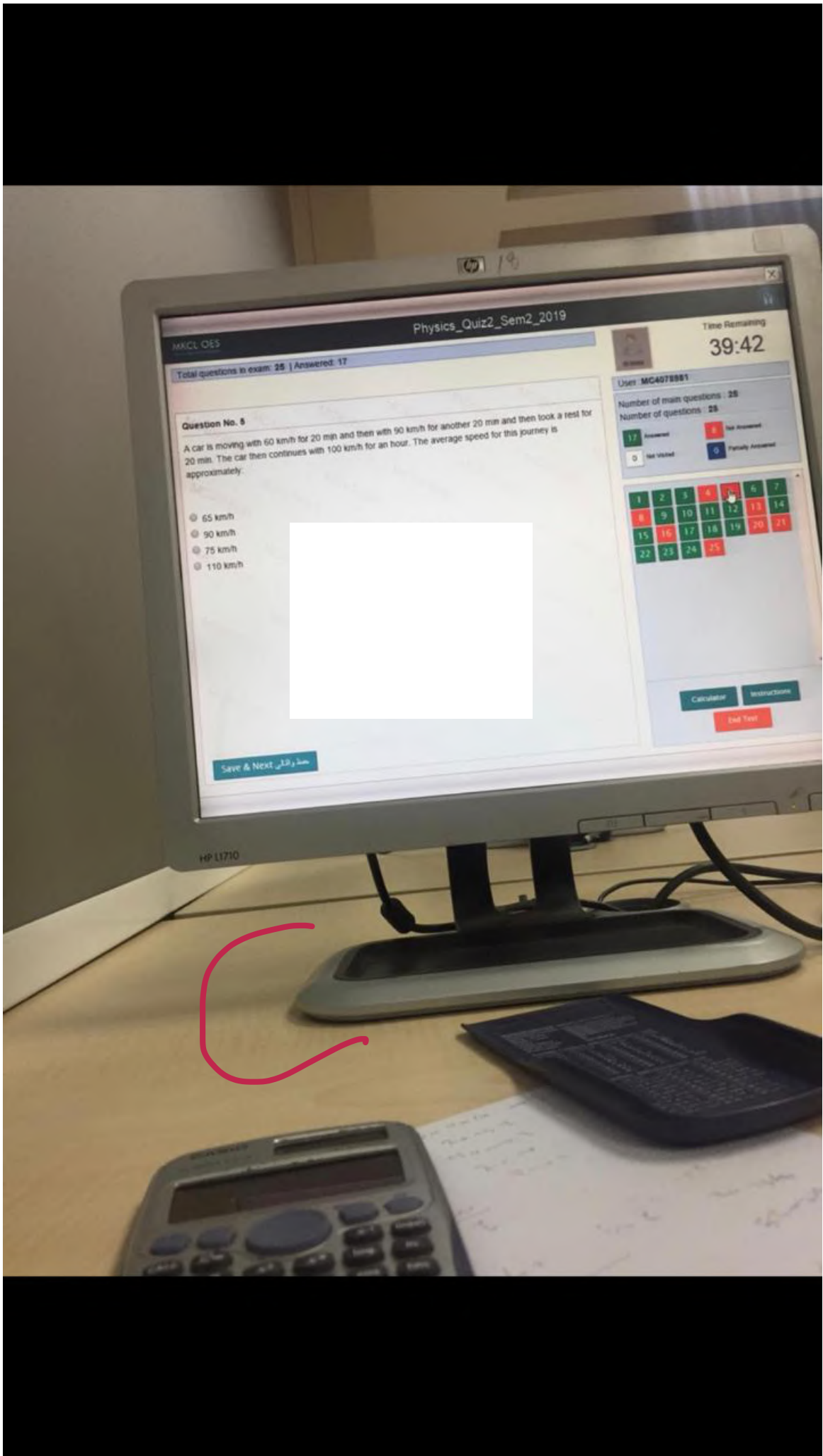
Total questions in exam: 25 | Answered: 5

Question No. 7

In the Celsius temperature scale, water boils at:

- 212 °C
- 273 °C
- 100 °C
- 373 °C





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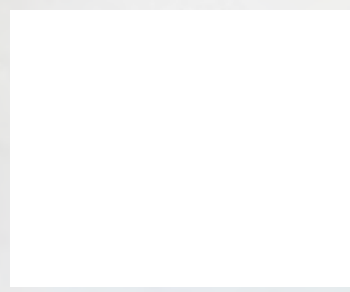
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Total questions to exam: 25 | Answered: 17

User: MC407E881
Number of main questions: 25
Number of questions: 25
17 Answered
8 Not Answered
0 Not Visited
0 Partially Answered

Question No. 6
A car is moving with 60 km/h for 20 min and then with 90 km/h for another 20 min and then took a rest for 20 min. The car then continues with 100 km/h for an hour. The average speed for this journey is approximately.

- 65 km/h
- 90 km/h
- 75 km/h
- 110 km/h

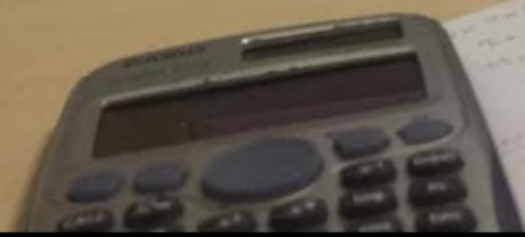
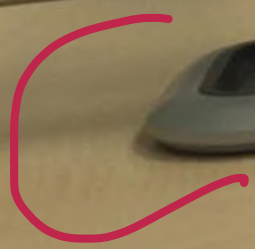


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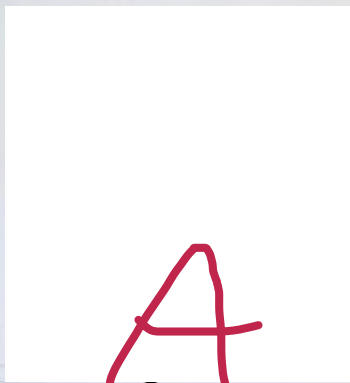
Total questions in exam: 25 | Answered: 17

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Question No. 8

A 750-N load is lifted a vertical distance of 20 m in 10 s. What power is developed?

- 1.5 kW
- 1500 kW
- 15 kW
- 150 kW



A

User: MC407881

Number of main questions: 25

Number of questions: 25

17 Answered 8 Not Answered

0 Not Visited 0 Partially Answered

1	2	3	4	5
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16	17	18	19	20
21	22	23	24	25

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Calculator

End Test

HP L1710





Total questions in exam: 25 | Answered: 7

Question No. 9

According to Newton's second law ($F=ma$), if F is kept constant, then:

- $F = a/m$
- $a = m$
- m is directly proportional to the acceleration a
- m is inversely proportional to the acceleration a



Save & Next

D

Total questions in exam: 25 | Answered: 7

Question No. 11

A painter weighing 630 N climbs to a height of 5 m on a ladder. What is the increase in gravitational potential energy of the painter?

- 3.15 J
- 3.15 kJ
- 31.5 kJ
- 31.5 J



B

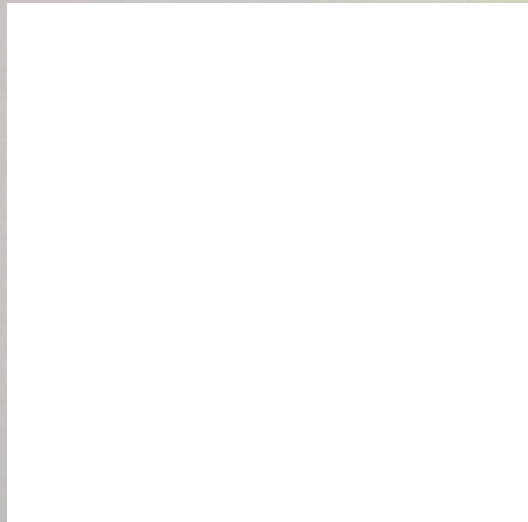
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Total questions in exam: 25 | Answered: 18

Question No. 5

The unit of the coefficient of friction is:

- m/s/s
- newton
- newton/kg
- has no units

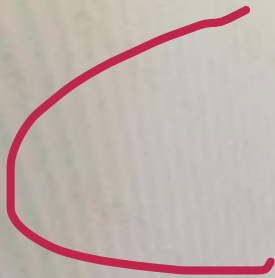
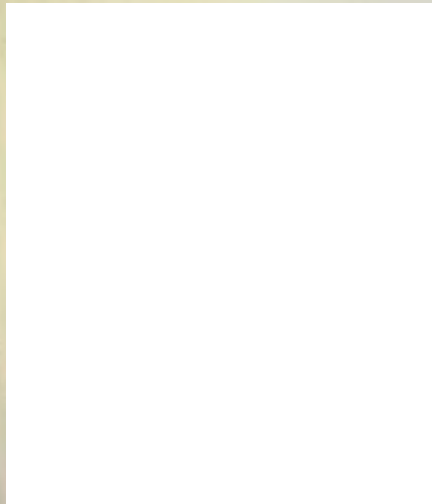


D

Question No. 13

The power needed to speed up a 1000-kg car from zero km/h to 90 km/h in 10 seconds is:

- 45.5 kW
- 41.5 kW
- 31.25 kW
- 21.5 kW



Save & Next

Total questions in exam: 25 | Answered: 8

Question No. 23

Which of the following do not help reducing (بطل) kinetic friction:

- using Teflon
- using heavy weights
- using smoother surfaces
- using lubrication (تزييت)

B



Total questions in exam: 25 | Answered: 19

Question No. 21

A force of 1 N is the same as:

- 1 kg m s
- 1 kg m/s/s
- 1 kg m/s
- 1 kg s/m



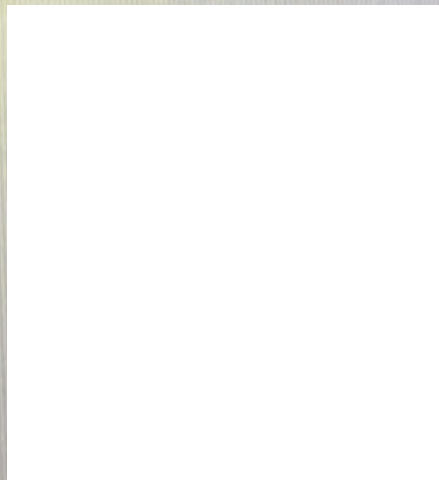
B

Total questions in exam: 25 | Answered: 12

Question No. 14

If a bullet is fired from a handgun with a force F_1 , the handgun recoils (ترند) with a

- F1 and F2 are not equal
- F1 and F2 are equal and in the same direction
- F1 and F2 are equal and perpendicular
- F1 and F2 are equal and opposite



D

Total questions in exam: 25 | Answered: 7

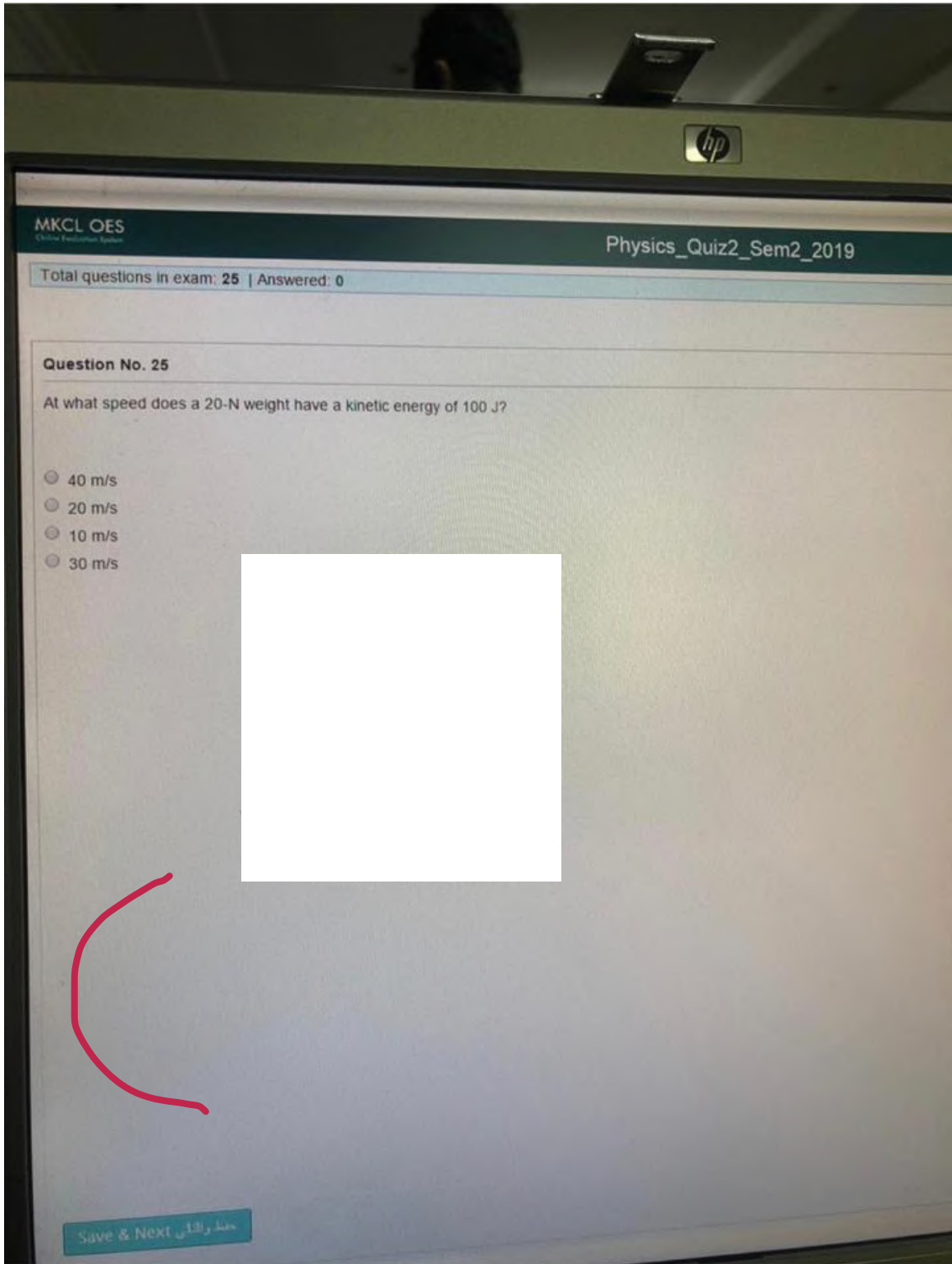
Question No. 22

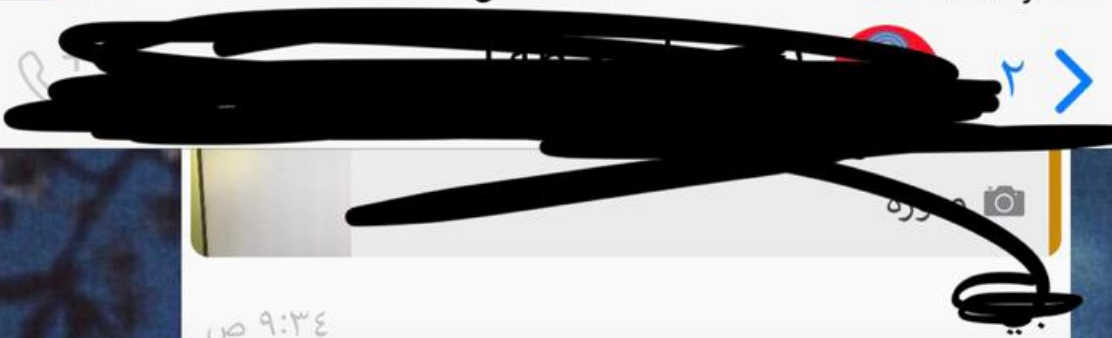
If there is a net force acting on a moving object, the object must be:

- small
- moving with constant velocity
- large
- accelerating

D

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9:34 ص

رسالة محوِّلة

Which of these can not be a unit of heat :

- BTU
- WATT
- CALORI
- JOULE

B

9:36 ص

~Ghazi Mug

~Ghazi Mug

Which of these can not be a unit of heat :

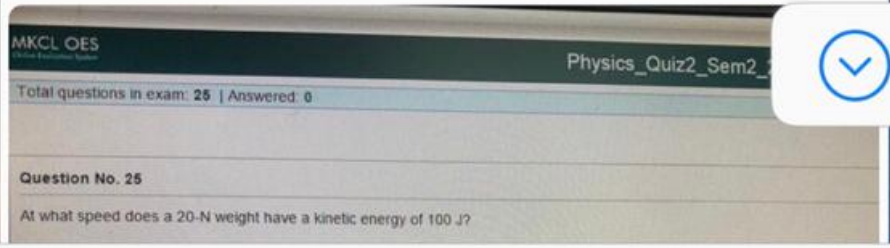
- BTU
- WATT

9:36 ص

بي

~Ghazi Mug

رسالة محوِّلة



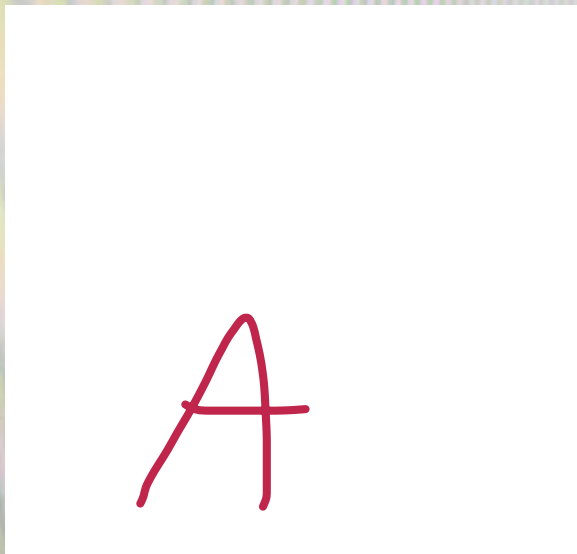
وحدهم مشرفو المجموعة يستطيعون إرسال الرسائل



Question No. 15

How long would it take a 5-kW motor to raise a 500-kg mass to a platform 4 m above the floor?

- 4 s
- 3 s
- 2 s
- 1 s



Question No. 17

The work done to vertically lift a ^{kg} 450-kg beam at a uniform speed a distance of 15 m/s.

الميزون الشغل
للرفع الرأس

ساعة
سواء منتظلي عند

- 675000 J
- 6750 J
- 67500 J
- 675 J

E_p

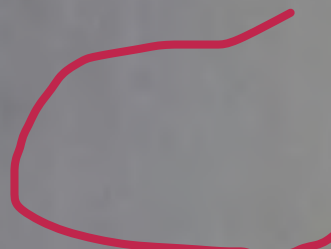
$$W = F \cdot d$$

$$= m \cdot g \cdot h$$

$$= (450)(10)(15)$$

عند ارتفاع رأسياً

العمل = طاقته ارتفاع



Question No. 1

A car in linear motion has initial speed = 20 m/s. If it travels for 20 seconds with acceleration = 2 m/s/s, the total distance it covers is.

- 400 m
- 100 m
- 200 m
- 800 m

D

$$v_f = v_i + at \quad \times$$

دوره ثابت است

$$d = v_i t + \frac{1}{2} at^2$$

$$= (20)(20) + \frac{1}{2}(2)(20)^2$$

$$= 400 + 400$$

$$= 800$$

D

Question No. 17

A work of 50 kJ is done to vertically lift a beam at a uniform speed a distance of 25 m. The weight of the beam is.

العمل المنجز 50 kJ لرفع حزمة بسرعة ثابتة مسافة 25 m . الوزن هو.

- 2000 N
- 200 N
- 50 N
- 500 N

$$E_p = mgh$$

$$m = \frac{E_p}{gh} = \frac{50 \times 10^3}{(25)(10)}$$

=

العمل المنجز
 50 kJ
 25 m
 10

A

Question No. 13

A large boulder at rest on top of a hill possesses

مثلاً ساکن بلوئزہ کیو

- حالتہ وضع
- potential energy
 - both potential and kinetic energy
 - kinetic energy
 - no energy

A

Question No. 4

If an object is not in free fall, before it reaches terminal speed, its acceleration is:

قناریه کره متناهی وصول قبل سقوط نه لیه رسم لو

- ^{من انکه} less than g
- equal to g
- more than g
- zero

A

Question No. 2

Assume that you were driving with a constant speed of exactly 120 km/h for 5 minutes. During this time your instantaneous speed is

- Ⓐ 60 km/h
- Ⓑ 100 km/h
- Ⓒ 120 km/h
- Ⓓ 120 m/s

Constant speed = instantaneous speed

Question No. 2

An object is moving in straight line and decreases its speed uniformly from 40 m/s to 10 m/s within 10 seconds. Its deceleration is

- 1 m/s/s
- 0.5 m/s/s
- 3 m/s/s
- 2 m/s/s

$$a = \frac{v_f - v_i}{t} = \frac{10 - 40}{10} = \frac{-30}{10} = -3$$



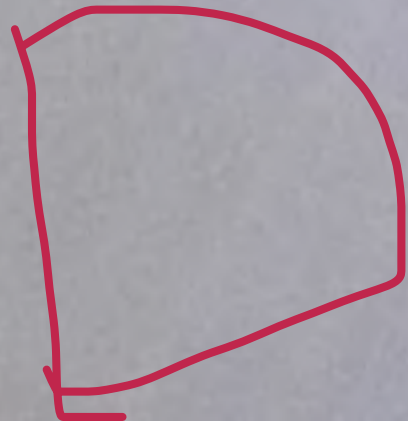
Question No. 16

Power is defined as the:

معرّف قَدْر

- force per unit time
- force \times distance
- energy \times time
- rate of doing work

معدّل بنیّ شغل



Question No. 17

The work done by a worker to lift 100 N of bricks to a height of 3 m is:

رفع كهرز الميزون التمد

$$E_p = mgh$$
$$= (100)(3)$$
$$= 300$$

- 100 J
- 300 J
- 400 J
- 200 J

B

Question No. 6

A man has a mass of 75 kg on Earth. His mass on the Moon is:

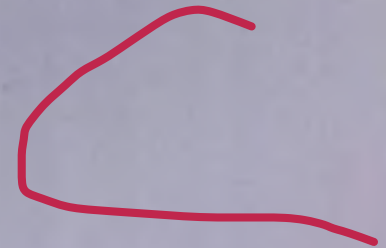
انسان کا (وزن) چاند پر کیا ہے؟

اس کا وزن چاند پر کیا ہے؟

- M = 12.5 kg
- M > 75 kg
- M = 75 kg
- M < 75 kg

$$m_{\text{earth}} = m_{\text{moon}}$$

$$\text{Weight}_{\text{earth}} = 6 \text{ Weight}_{\text{moon}}$$



Question No. 13

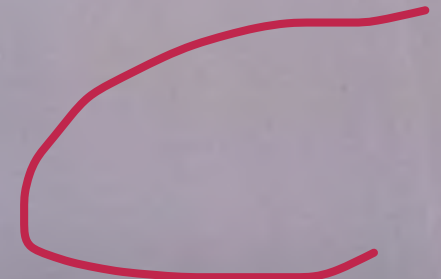
A 0.5-kg book on a table has a potential energy of 5 J (relative to the ground). The table's height is:

Handwritten notes above the text:
 E_p (Potential Energy)
 5 ج (5 J)
 طاقت (Energy)
 نسبت (Relative)
 الأرض (to the ground)
 ارتفاع الطاولة (Table's height)
 كتلة الكتاب (Mass of the book)

- 1.5 m
- 0.3 m
- 1 m
- 0.5 m

$$E_p = m \cdot g \cdot h$$

$$h = \frac{E_p}{mg} = \frac{5}{(0.5)(10)}$$



Question No. 7

Two workers push in the same direction on a box against a frictional force. One pushes with a force of 500 N, the other with a force of 600 N. If the net force is 400 N, the friction force is:

القوة المحصلة

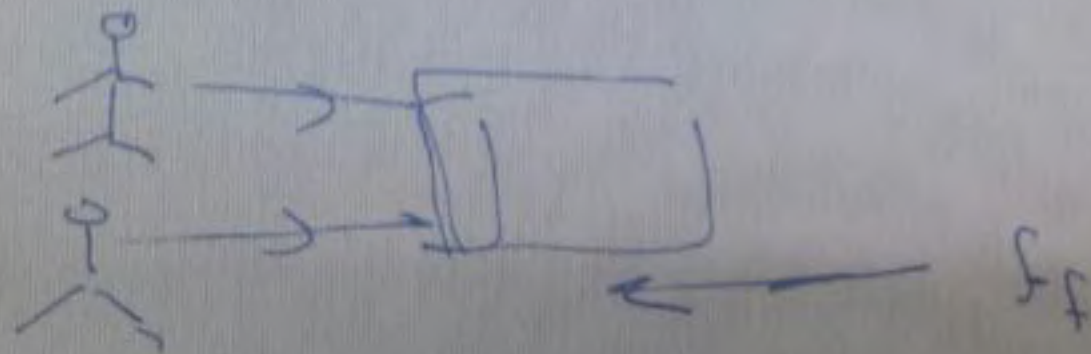
- 500 N
- 700 N
- 300 N
- 400 N

نفس الاتجاه

$$\text{Same direction } F_3 = 600 + 500 = 1100 \text{ N}$$

$$F_{\text{net}} = F - f_f \quad \left| \quad 1100 - 400 = f_f \right.$$

$$400 = 1100 - f_f \quad \left| \quad \quad \quad = 700 \right.$$



B

Question No. 2

A car in linear motion with acceleration $a = 2 \text{ m/s}^2$ and initial speed $v_i = 20 \text{ m/s}$ reaches a final speed $v_f = 30 \text{ m/s}$ after going a distance of

مسافة

a

v_i

v_f

- 500 m
- 250 m
- 100 m
- 125 m

$$v_f^2 - v_i^2 = 2ad$$

$$d = \frac{v_f^2 - v_i^2}{2a} = \frac{(30)^2 - (20)^2}{(2)(2)}$$

$$= 125 \text{ m}$$

D

Question No. 1

An object travels in straight line and increases its speed uniformly from 80 km/h to 120 km/h . Its average speed is.

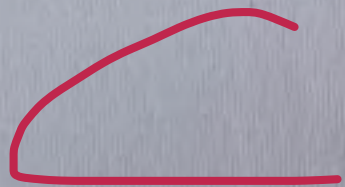
$$V_{av} = \frac{V_f + V_i}{2} = \frac{80 + 120}{2}$$

250 km/h

200 km/h

100 km/h

150 km/h



Question No. 7

If a man pushes a 100-kg box on a level floor and the box moves with constant velocity, the push force on the box is: (given: coefficient of kinetic friction $\mu = 0.2$)

مشتق
اقتداء معادل فعل الحركه في السطح المستوي
تحت الحركة الدائرية

- 100 N
- 50 N
- 1000 N
- 200 N

قوة الجاذبية \rightarrow f_N \leftarrow قوة الاحتكاك

قوة الوزن \rightarrow $f_f = \mu \cdot f_N$ معادل الاحتكاك

$= (0.2) (100 \times 10)$

Question No. 18

Work is done on an object if the object is affected by:

- force and displacement
- medium force without displacement
- large force without displacement
- small force without displacement

الجواب

بواسطة

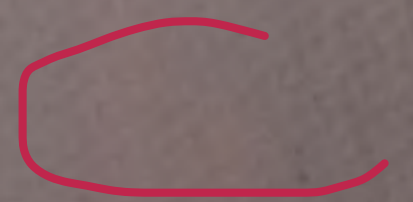
بواسطة

A

Question No. 5

في اتجاه دائما قوة الاحتكاك
The friction force always acts in a direction:

- same as the direction of weight
- normal to the surface
- opposite to the direction of motion
عكس الحركة
- same as the direction of motion



Question No. 14

Before reaching the ground, an apple falling down from a tree has

لدى الشجرة من الأشجار سقطت لعاف للأرض (الطاقة الحركية)

- both potential and kinetic energy
- no energy
- potential energy only
- kinetic energy only

~~PK~~



A

An object that has big inertia must have:

مقدار قوتِ انرژیا کے لیے اسی وجہ سے

کم از کم

- big mass
- small mass
- big area
- big volume

A

The weight of a 20-kg brick is nearly:

- 200 kg
- 200 N
- 20 N
- 20 kg

$$\begin{aligned} F_g &= m \cdot g \\ &= (20)(10) \\ &= 200 \text{ N} \end{aligned}$$

B

Question No. 4

If an object is in free fall, the distance it covers every successive (متتاليه) second

تزداد
بسيط فقط

كل المقصوله الماده

ثانيا

- is zero
- keeps decreasing
- remains constant
- keeps increasing

تزداد

D

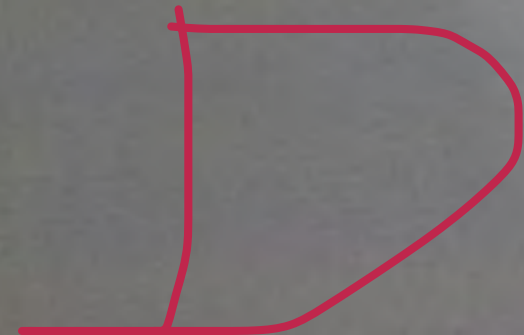
D

Question No. 8

The physical quantity that measures inertia is:

المقدّر تيسر ال الكبي الصيدي
الذاتي

- length
- area
- volume
- mass

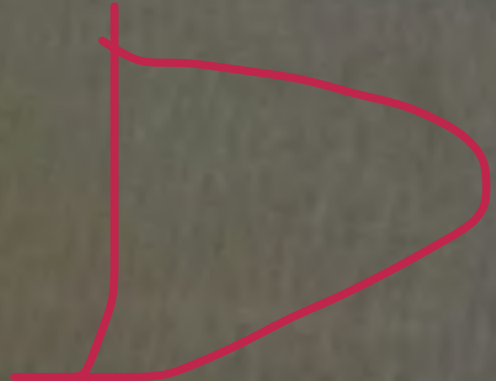


Question No. 16

The energy units are.....

رصد = الطاقه

- Kilogram
- Pound
- Kilometer
- Kilocalories



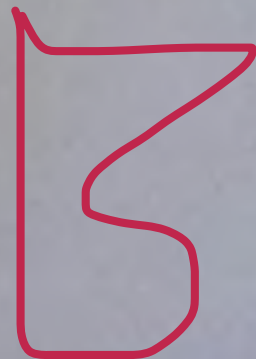
Question No. 1

An object travels in straight line and decreases its speed uniformly from 40 m/s to a full stop within 10 seconds. Its deceleration is:

- 2 m/s/s
- 4 m/s/s
- 1 m/s/s
- 3 m/s/s

Handwritten notes: v_i (initial velocity), $v_f = 0$ (final velocity), t (time), and Urdu text: "خط سیدھے میں سفر" (straight line travel) and "مساافت میں سرعت کا ہلکا ہونا" (deceleration during travel).

$$a = \frac{v_f - v_i}{t} = \frac{0 - 40}{10}$$
$$= \frac{-40}{10} = -4$$



Question No. 5

Kinetic friction is always

عادة اقل من الاحتكاك

the maximum static friction.

اصلا من سائلا الاحتكاك

- less than
- more than
- half
- equal to

A

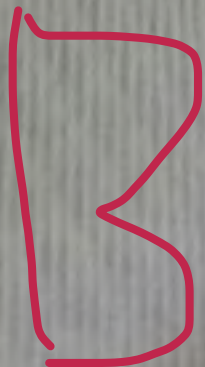
Question No. 10

If the net force on an m 100-kg crate is 50 N, its acceleration is:

- A 1 m/s/s
- B 0.5 m/s/s
- C 5 m/s/s
- D 2 m/s/s

$$F = m a$$
$$a = \frac{F}{m} = \frac{50}{100}$$

$$= 0.5$$



Question No. 9

کیا نظریات

"A moving object likes to keep its state of motion" is the meaning of

یعنی ذاتی حرکت میں سازگار حیثیت جسم موجود

- acceleration
- inertia مستقراتی
- velocity
- force

B

Question No. 6

Friction on a non-moving object is called:

ایک صحیح غیر متحرک اصطکاک
ایستادن

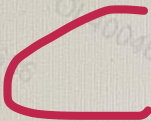
- static friction
- kinetic friction
- terminal friction
- dynamic friction

A

Question No. 2

An object is thrown vertically upward. Its speed at the maximum height is:

- equals the initial speed by which it was thrown.
- greater than the initial speed by which it was thrown.
- zero
- greater than the average speed





Total questions in exam: 25 | Answered: 0

Question No. 5

The friction between two surfaces increases as:

- area between the surfaces increases.
- the normal force between the surfaces decreases.
- the coefficient of friction decreases.
- the normal force between the surfaces increases.

D



Total questions in exam: 25 | Answered: 0

Question No. 18

Neglecting air resistance, if a stone is thrown straight up with initial speed = 30 m/s, it will reach its maximum height after (use

- 10 s
- 3 s
- 1 s
- 6 s

B



Total questions in exam: 25 | Answered: 0

Question No. 19

Gravitational potential energy of an object is due to its:

- temperature
- position
- velocity
- acceleration

B



Total questions in exam: 25 | Answered: 0

Question No. 4

If the speed of an object increases five times, its kinetic energy increases:

- 2.5 times
- 25 times
- 5 times
- 10 times

B

Save & Next حفظ التالي



Total questions in exam: 25 | Answered: 0

Question No. 20

A rock falls from an edge of a mountain 45 m above the ground. Find its speed as it hits the ground? (use $g = 10 \text{ m/s}^2$)

- 40 m/s
- 20 m/s
- 10 m/s
- 30 m/s





Total questions in exam: 25 | Answered: 0

Question No. 25

What speed does a 20-N weight have a kinetic energy of 100 J?

- 40 m/s
- 20 m/s
- 10 m/s
- 30 m/s

C

Total questions in exam: 25 | Answered: 4

Question No. 2

If no net force acts on a moving object, it will have:

- increasing velocity
- zero velocity
- increasing acceleration
- zero acceleration

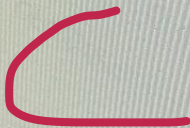


Total questions in exam: 25 | Answered: 4

Question No. 15

The law of action and reaction is Newton's:

- Inertia law
- Second law
- Third law
- First law



Total questions in exam: 25 | Answered: 4

Question No. 18

If an object is falling with an acceleration that is less than the acceleration due to gravity, the object:

- must have big inertia.
- must have a small mass.
- is non-freely falling.
- is freely falling.



Total questions in exam: 25 | Answered: 19

Question No. 21

A force of 1 N is the same as:

- 1 kg m s
- 1 kg m/s/s
- 1 kg m/s
- 1 kg s/m



Save & Next حفظ والتالي



Total questions in exam: 25 | Answered: 0

Question No. 5

The friction between two surfaces increases as:

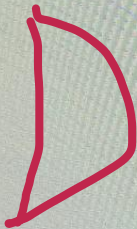
- area between the surfaces increases.
- the normal force between the surfaces decreases.
- the coefficient of friction decreases.
- the normal force between the surfaces increases.

D

Question No. 22

If there is a net force acting on a moving object, the object must be:

- small
- moving with constant velocity
- large
- accelerating



Total questions in exam: 25 | Answered: 8

Question No. 23

Which of the following do not help reducing (بطل) kinetic friction:

- using Teflon
- using heavy weights
- using smoother surfaces
- using lubrication (تزييت)

B





Total questions in exam: 25 | Answered: 0

Question No. 3

In the Fahrenheit temperature scale, water freezes at:

- 32 °F
- 0 °F
- 212 °F
- 273 °F

تجمد الماء بالفهرنهايت ٣٢A

A



Total questions in exam: 25 | Answered: 0

Question No. 6

Temperature is a measure of the _____ an object:

- volume of
- area of
- hotness or coldness of
- color of





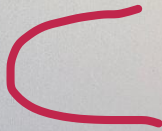
Total questions in exam: 25 | Answered: 0

Question No. 9

You applied a horizontal force of 200 N to push a level table but the table remained at rest. The static friction force is:

- 20 kg
- 20 N
- 200 N
- 200 kg

طاولة دفعناها بقوة مقدارها 200
ولم تتحرك فان قوة الاحتكاك
تساوي 200



Question No. 2

When we heat a block of iron, the iron atoms:

- vibrates more
- decrease in number
- increase in number
- stop moving

A

Save & Next

10/05/2015

Question No. 13

A

A substance should absorb heat to change from

- gas to liquid
- liquid to gas
- gas to solid
- liquid to solid

B

Save & Next

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Total questions in exam: 25 | Answered: 3

Question No. 24



As an object is freely falling, the speed by which it hits the ground is:

- zero
- smaller than the initial speed.
- maximum speed during the motion.
- same as the initial speed.

[Save & Next](#)

102.160.6.20

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Question No. 6

A⁻ A A⁺

"If no net force acts on an object, it will move at constant velocity" is a statement of:

- Pythagoras principle
- Newton's first law
- Newton's second law
- Newton's third law

B

Save & Next

100.160.6.20

PHCL 0811 Exam Client Version 2.0.0.1

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F5

F6

F7

F8

F9

F10

A 15-N object is freely falling from a height of 100 m. Its kinetic energy after it falls 25% of its initial height is:

- 175 J
- 375 J
- 50 J
- 150 J

B

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Question No. 25

The power needed to speed up a 1500-kg car from zero km/h to 108 km/h in 10 seconds is:

- 67.5 kW
- 57 kW
- 75 kW
- 85 kW

A



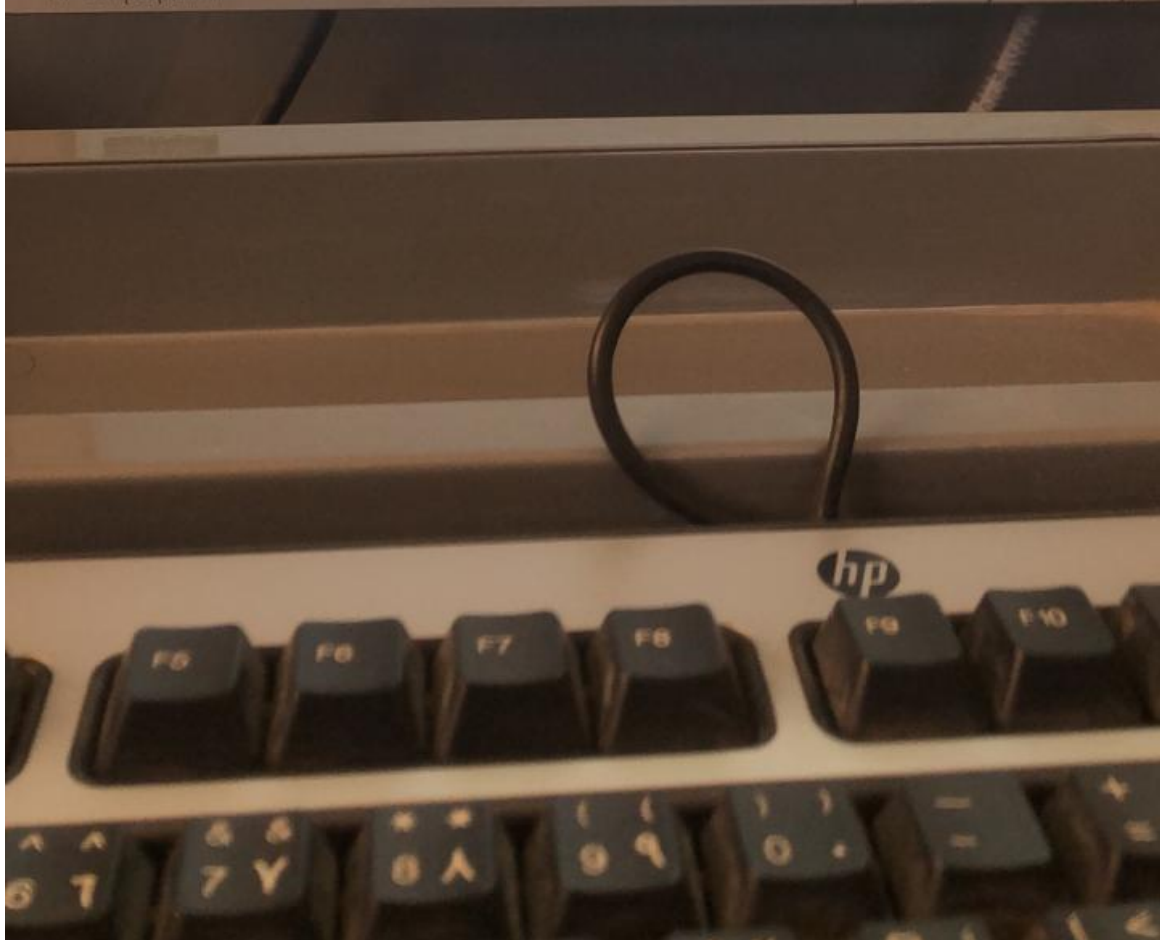
One kilocalorie is the amount of heat that increases the temperature of 1 kg of water by:

- 1 R
- 32 °F
- 1°C
- 10 K



Save & Next

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Question No. 9

As a vase is falling down from a high building, its:

- potential and kinetic energies are always equal.
- potential energy increases
- kinetic energy decreases
- potential energy decreases

D

Save & Next

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Total questions in exam: 28 | Answered: 9

Question No. 19

An object travels in straight line and increases its speed uniformly from 20 m/s to 30 m/s after covering 100 m. Its acceleration is:

- 4 m/s/s
- 2.5 m/s/s
- 0.25 m/s/s
- 1 m/s/s

Save & Next

B

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Question No. 5



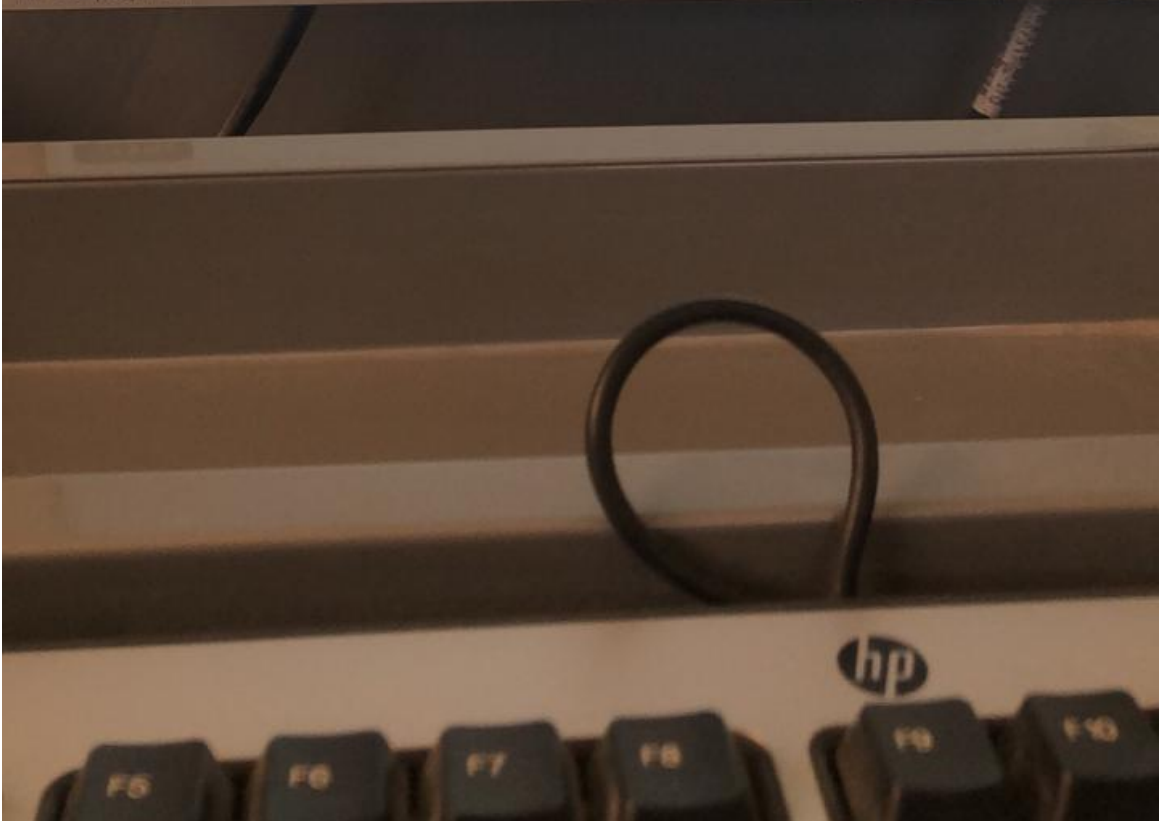
A car is moving with 110 km/h for two hours and then took a rest for 30 min. The car then continues with 120 km/h for an hour. The average speed for this journey is approximately:

- 85 km/h
- 110 km/h
- 97 km/h
- 75 km/h



Save & Next

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Total questions in exam: 25 | Answered: 0

Time R

57

User: OL4104681

Number of main questions:
Number of questions: 25

0	Answered	25
0	Not Visited	0

Question No. 4

If a stone drops in a free fall from the edge of a mountain, the distance it covers after 8 seconds is (use $g = 10 \text{ m/s}^2$).

- 80 m
- 32 m
- 320 m
- 420 m



Question No. 22

A pile driver falls freely from a height of 5 m above a pile. Its velocity as it hits the pile is:

- 10 m/s
- 8 m/s
- 2 m/s
- 4 m/s

A

Question No. 3

If a rock falls from a balcony and hits the ground with the speed of 10 m/s, the balcony's height is

- 10 m
- 5 m
- 40 m
- 20 m

B

Save & Next

10.65.7.215

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Total questions in exam: 25 | Answered: 6

Question No. 2

A temperature difference of 100 degrees Celsius is equivalent to a temperature difference of 180 degrees Fahrenheit. The temperature difference of 75 degrees Celsius is equivalent to:

- 20 degrees Fahrenheit
- 135 degrees Fahrenheit
- 75 degrees Fahrenheit
- 25 degrees Fahrenheit

B

Save & Next

Question No. 18

A temperature difference of 100 degrees Celsius is equivalent to a temperature difference of 180 degrees Fahrenheit. This means that a temperature difference of 7 degrees Celsius is equivalent to:

- 18 degrees Fahrenheit
- 12.6 degrees Fahrenheit
- 9 degrees Fahrenheit
- 20 degrees Fahrenheit

B

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hp

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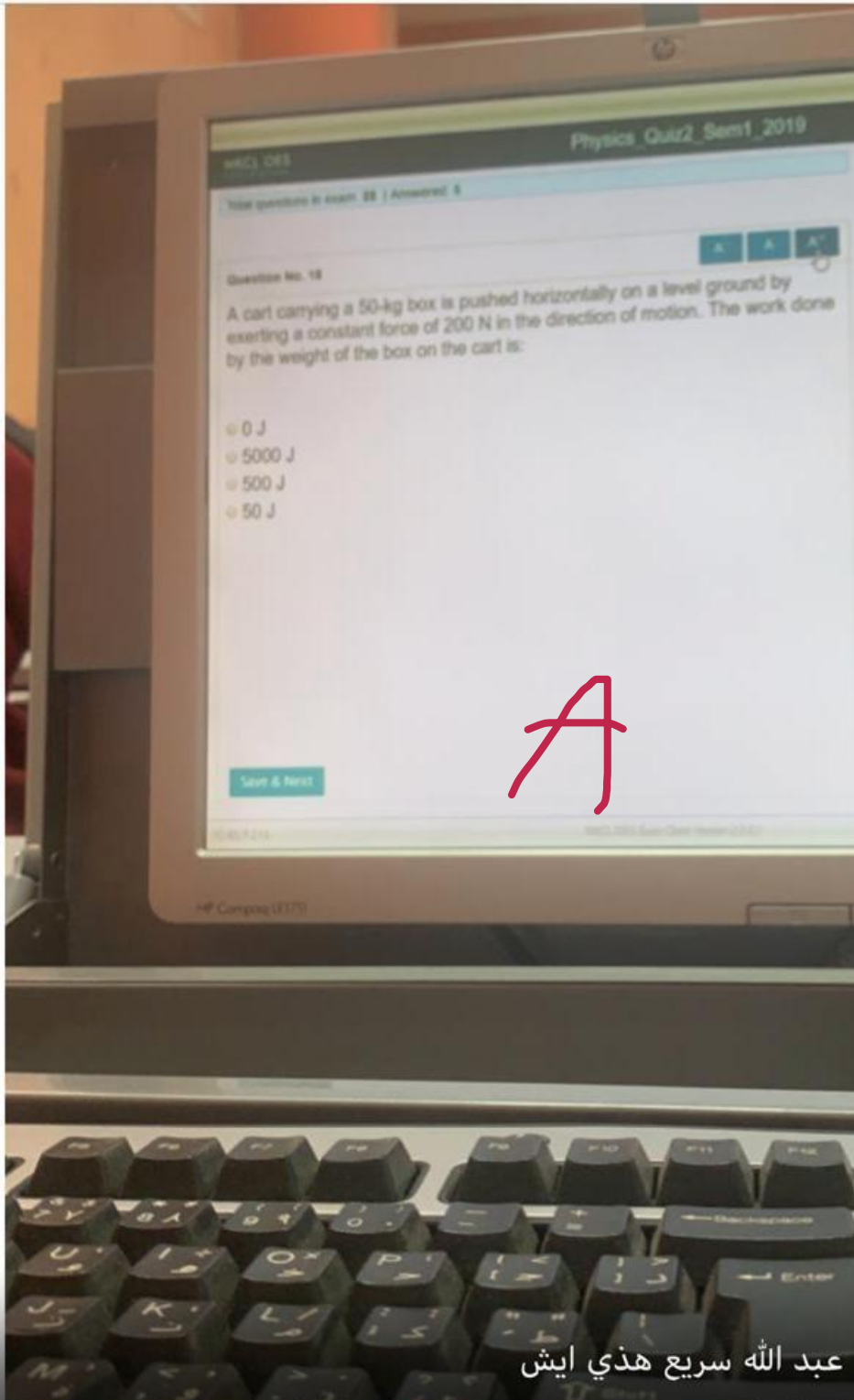
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All Media



عبد الله سريع هذي ايش



Question No. 25

A⁻ A A⁺

If a car's average speed is 40 m/s on a 5-hour trip, the total distance it covers is:

- 540 km
- 450 km
- 504 km
- 720 km

Save & Next

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Question No. 1

A temperature difference of 100 degrees Celsius is equivalent to a temperature difference of 180 degrees Fahrenheit. This means that a temperature difference of 3 degrees Celsius is equivalent to:

- 45 degrees Fahrenheit
- 25 degrees Fahrenheit
- 54 degrees Fahrenheit
- 5.4 degrees Fahrenheit

D

Total questions in exam: 25 | Answered: 0

Question No. 15

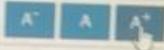
If no net force acts on a moving object, it will have:

- increasing acceleration
- zero velocity
- increasing velocity
- no acceleration

D

Save & Next

Question No. 19



A 1500-kg car with kinetic energy of 780 kJ is approximately going with a speed of:

- 116 m/s
- 32 km/h
- 116 km/h
- 90 km/h

Save & Next



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Total questions in exam: 25 | Answered: 22

Question No. 15

A A A

A ball is dropped from the top of a building. It has a velocity of 31 m/s when it hits the ground? In order to find how tall is the building we can use two of the following equation:

1. $V_f = V_i + a.t$	2. $S = vt + \frac{1}{2}gt^2$	3. $g = 9.8 \text{ m/s}^2$
4. $V_f = g.t$	5. $S = \frac{1}{2}gt^2$	6. $v_f^2 - v_i^2 = 2 a.s$

- only 3
- 1 and 3
- only 5
- 4 and 5

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10.65.7.215

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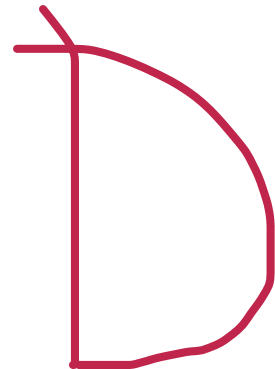
D

Question No. 22

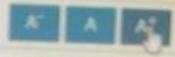
A pile driver falls freely from a height of 3.50 m above a pile. Its velocity as it hits the pile could be directly calculated using equation(s):

1. $V_f = V_i + a.t$	2. $V_f = \sqrt{2 g.h}$	3. $\bar{v} = \frac{s}{t}$
4. $S = \frac{1}{2} a.t^2 + v_i.t$	5. $V = \frac{v_f + v_i}{2}$	6. $v_f^2 - v_i^2 = 2 a.s$

- 3
- 4
- 1
- 2



Question No. 8



The time taken by a 8-kW motor to raise a 1000-kg mass to a platform 10 m above the floor is:

- 20 s
- 12.5 s
- 10 s
- 15 s

B

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Question No. 14

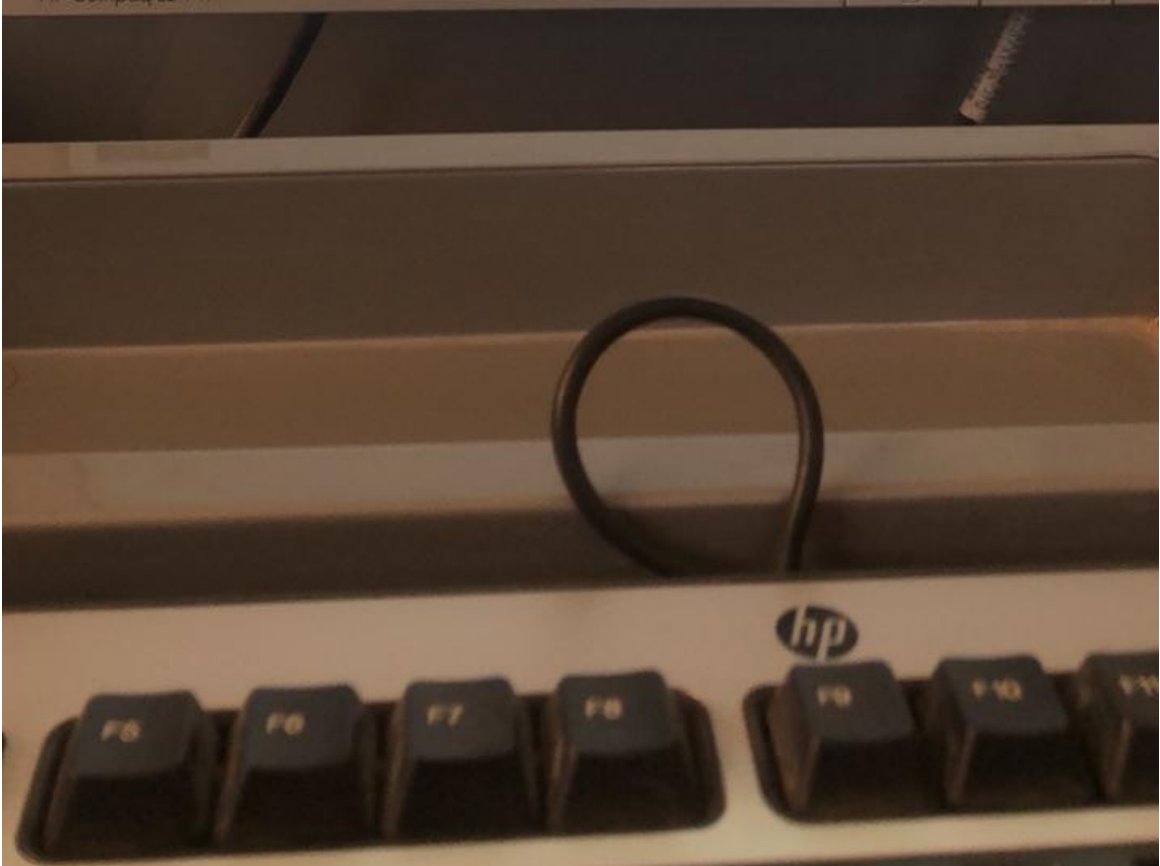
A painter of mass 68 kg climbs to a height of 5 m on a ladder. What is the increase in gravitational potential energy of the painter?

- 3.15 J
- 31.5 kJ
- 31.5 J
- 3.4 kJ

Save & Next

D

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Question No. 10

A

Gravitational potential energy of an object is due to its:

- internal structure
- position
- speed
- acceleration

B

Save & Next

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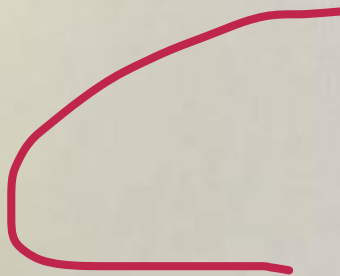


Total questions in exam: 25 | Answered: 1

Question No. 2

As an object is freely falling its acceleration is:

- increasing.
- zero.
- positive and constant.
- decreasing.



Total questions in exam: 25 | Answered: 21

Question No. 7

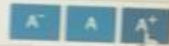
The coefficient of friction is always.

- a) unitless quantity
- b) less than 1
- c) negative
- d) more than 1

A

Save & Next

Question No. 12



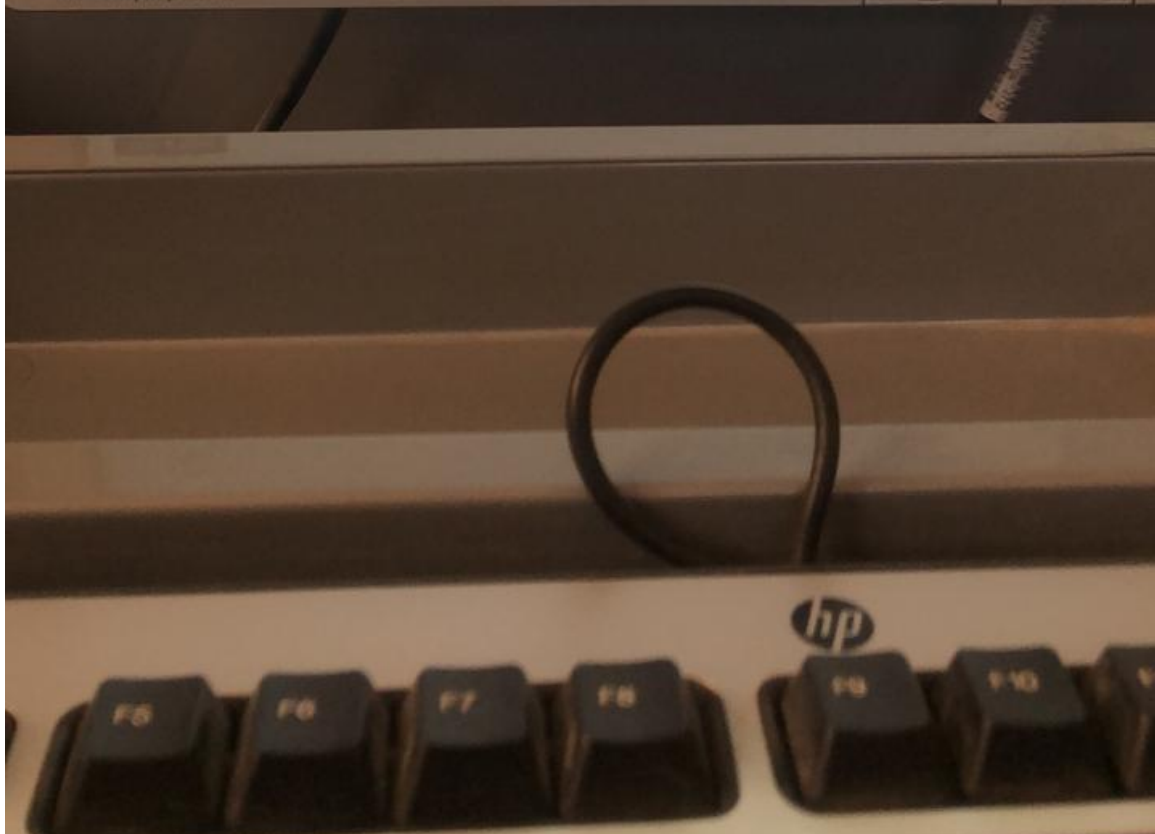
Two workers push in the same direction on a box against a frictional force of 700 N. If one pushes with a force of 500 N and the other with a force of 400 N, the net force is:

- 800 N
- 200 N
- 1600 N
- 600 N

B

[Save & Next](#)

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Question No. 20

The kinetic energy (KE) of a 1.5 ton car traveling at a speed of 30 m/s can be obtained using the following equation(s):

1. $P = PE/t$	2. $E = PE + KE$	3. $P = W/t$
4. 1 ton = 1000 kg	5. $KE = \frac{1}{2}mv^2$	6. 1 m/s = 3.96 km/h

- 3, 5 and 6
- 2 and 6
- 1 and 2
- 4 and 5

D

Question No. 2

A car is moving with 70 km/h for 45 min and then took a rest for 30 min. The car then continues with 120 km/h for two hours. The average speed for this journey is approximately:

A⁻ A A⁺

- 100 km/h
- 110 km/h
- 75 km/h
- 90 km/h



Question No. 24

If a rock falls from a balcony and hits the ground with the speed of 10 m/s, the balcony's height from the ground is (use $g = 10 \text{ m/s}^2$)

- 10 m
- 20 m
- 40 m
- 5 m

Save & Next

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Number: []
Answer: [0]
Next: []

1	2
8	9
15	16
22	23

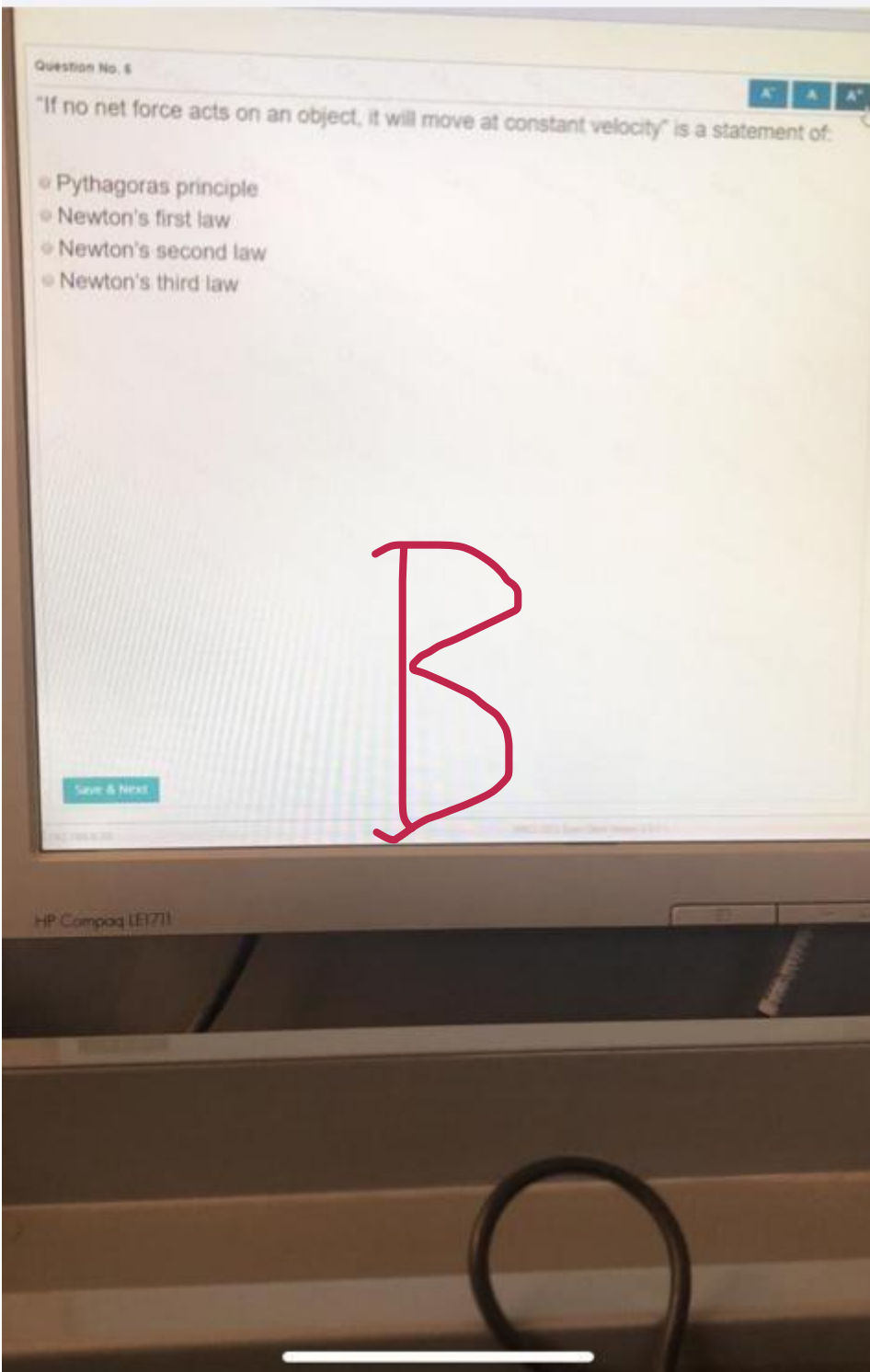
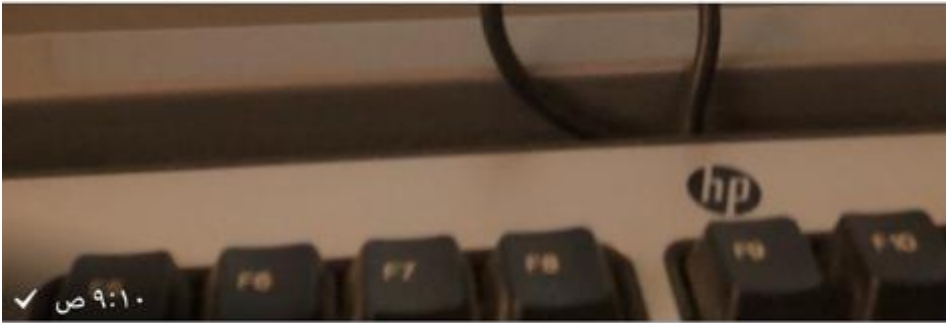
D

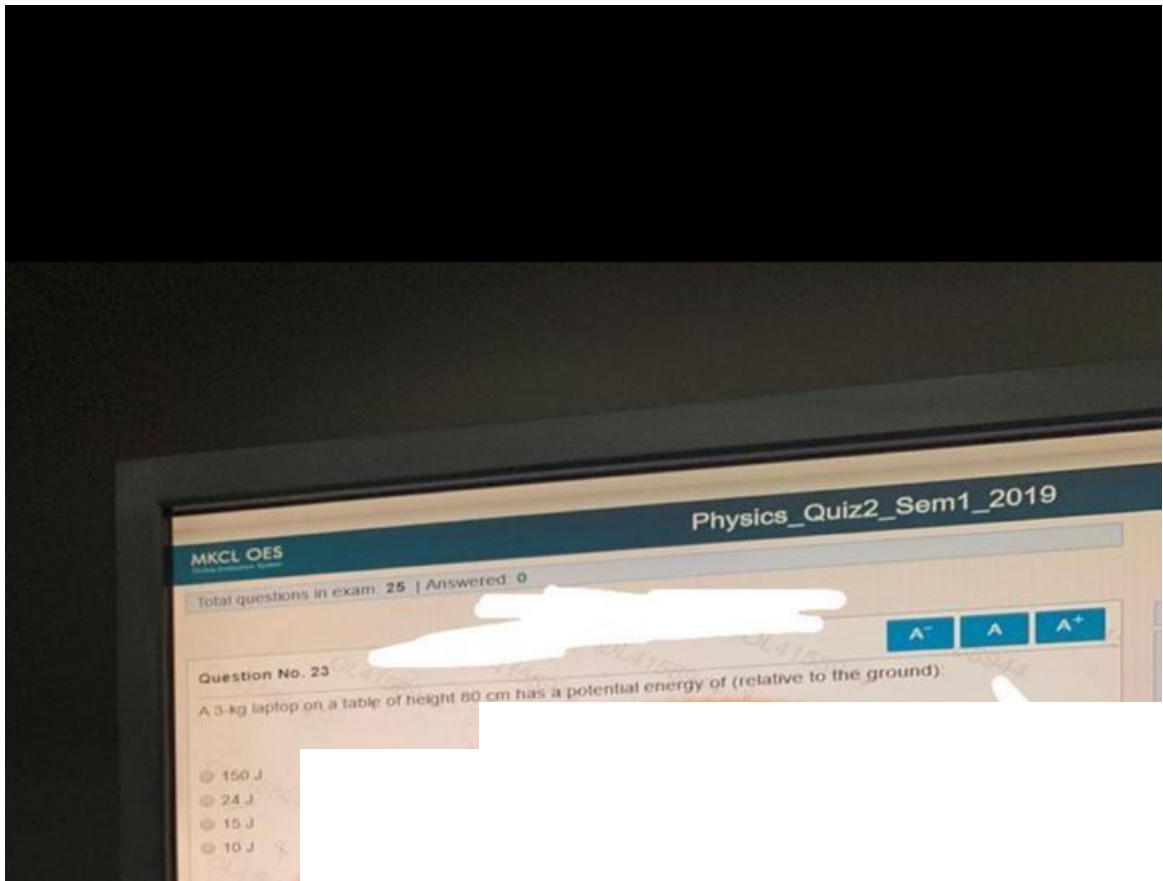


١٠:٥٢

تحديد

أنت
٢٢ من الصور





B

If a man pushes a 100-kg box with a 90-N force on a level floor and the box does not move, the force of friction between the box and the floor is:

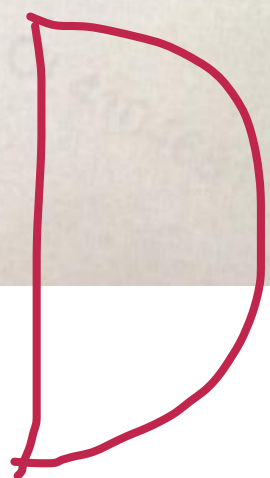
- 90 N
- 0 N
- 100 N
- 50 N

A

Question No. 1

During change of phase of a substance, its temperature

- changes rapidly
- decreases
- increases
- remains constant



Total questions in exam: 25 | Answered: 7

An object is thrown vertically upward. During its journey downward, the speed is: (neglect air resistance)

- constant
- zero
- decreasing
- increasing

D

Question No. 7

A 50-N object is freely falling from a height of 20 m. Its kinetic energy after it falls 90% of its initial height is:

- 90 J
- 900 J
- 75 J
- 225 J

B

If a net force of 100 N causes a crate to accelerate at 0.8 m/s/s, the crate's mass is:

80 kg

11 kg

111 kg

50 kg

B

Question No. 3

The kinetic energy of a 10,000-kg pile driver when it strikes a pile with velocity 10.0 m/s is:

- 50 J
- 0.5 kJ
- 50 kJ
- 0.5 MJ

D

Question No. 3

Which of the following temperatures is NOT possible now to measure?

- 278 °C
- 7645 °C
- 200 °C
- 274 °F

A

Save & Next

192.168.0.20

Question No. 23

The newton (N) is the unit of force, which can be expressed in the SI base as:

- kg m s
- kg m/s/s
- kg m/s
- kg s/m

A⁻ A A⁺

Save & Next

B

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hp

F6

F6

F7

F8

F9

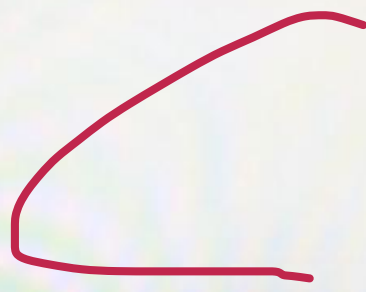
F10

Question No. 16



In the Fahrenheit temperature scale, the absolute zero (0 K) is approximately at:

- 0 °F
- 273 °F
- 460 °F
- 273 °F



Save & Next

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Question No. 17

A⁻ A

An object's average speed can be calculated using equation(s) number:

1. $v_f = v_i + a \cdot t$	2. $v_f = \sqrt{2gh}$	3. $v_{avg} = \frac{v}{2}$
4. $v = g \cdot t$ ($v_i = 0$)	5. $v_{avg} = \frac{v_i + v_f}{2}$	6. $d = \frac{v}{t}$

- 6
- 1
- 2
- 3 or 5

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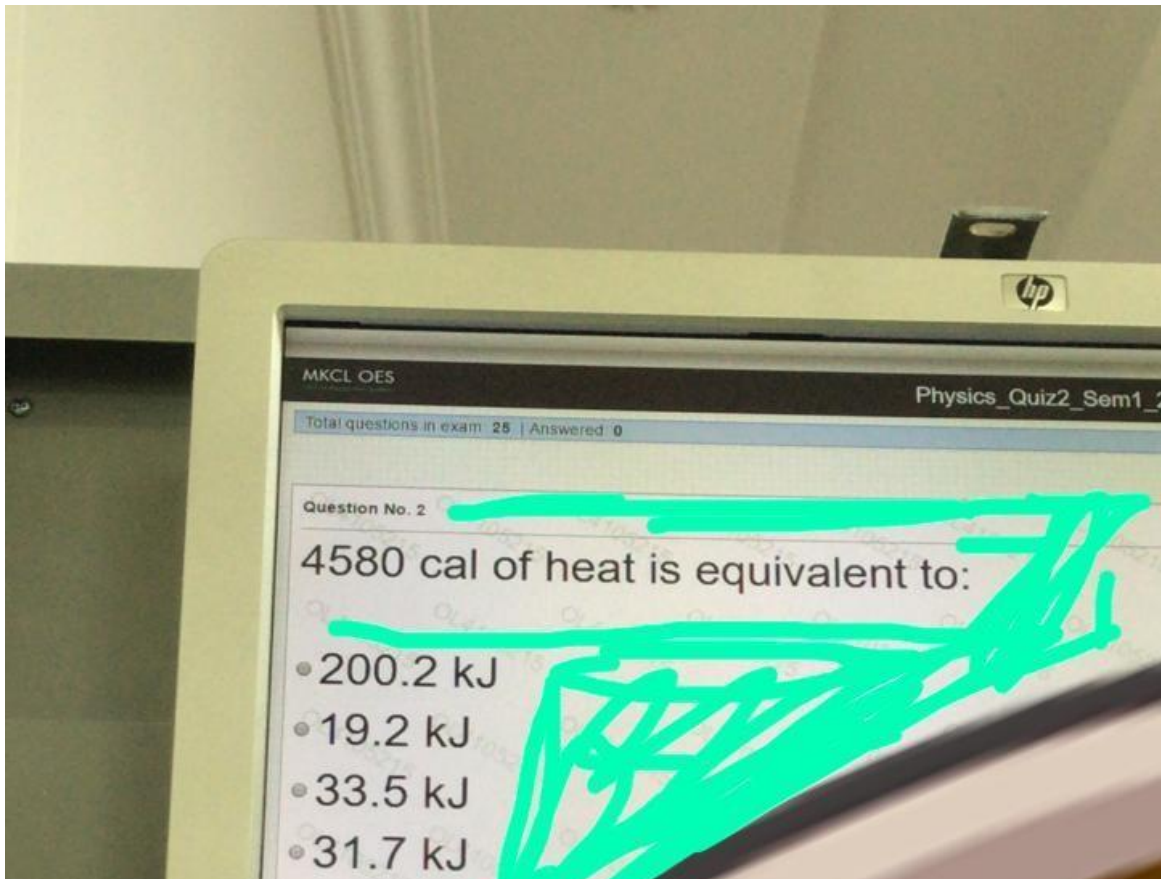
Total questions in exam: 25 | Answered: 4

Question No. 8

The heat of vaporization of a liquid is the heat that 1 kg of the liquid needs to

- change to gas
- change to liquid
- freeze
- change to solid

A



B

Question No. 1

Condensation is the change of phase from

- liquid to gas
- solid to liquid
- gas to liquid
- liquid to solid



Save & Next

Question No. 22

Which of the following is not a unit for the amount of heat:

- Joule
- BTU
- Calorie
- Fahrenheit

Question No. 2

A temperature of 150 °C equals:

- 302 °F
- 320 °F
- 203 °F
- 220 °F

A

Save & Next

Total questions in exam: 25 | Answered: 0

Question No. 5

In the Celsius temperature scale, the absolute zero is at:

- 273 °C
- 0 °C
- 100 °C
- 273 °C

A

Save & Next

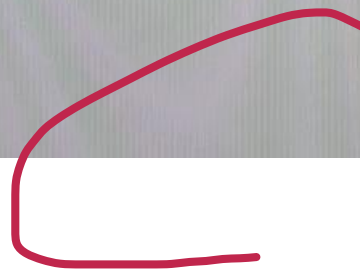
Total questions in exam: 25 | Answered: 10

Question No. 21

A⁻ A A⁺

5 kg of a liquid absorbs an amount of heat $Q = 116$ kcal, raising its temperature by $\Delta T = 40^\circ\text{C}$. The specific heat c of this liquid is

- $c = 3$ kcal/kg. $^\circ\text{C}$
- $c = 8$ kcal/kg. $^\circ\text{C}$
- $c = 0.58$ kcal/kg. $^\circ\text{C}$
- $c = 5.8$ kcal/kg. $^\circ\text{C}$



Question No. 20

A temperature of 30°C equals:

- 30 K
- 330 K
- 303 K
- 24 K



Question No. 4

The acceleration of a freely falling object is:

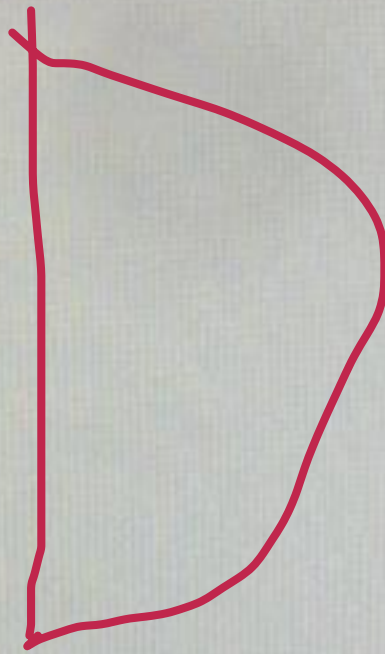
- the acceleration due to gravity
- greater than the acceleration due to gravity (g)
- zero
- less than the acceleration due to gravity

A

Question No. 20

In the Celsius temperature scale, the absolute zero is at:

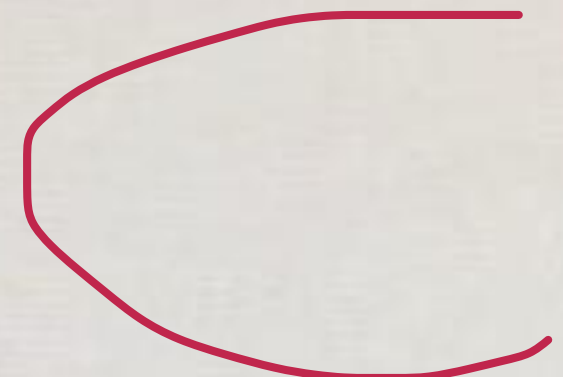
- 0 °C
- 459 °C
- 273 °C
- 273 °C



Question No. 14

With no air resistance and no friction, a swinging pendulum would:

- swing just once
- swing only 10 times
- swing forever
- swing for short time





Question No. 15

The acceleration due to gravity of the Earth is 6 times that of the Moon. If the potential energy of the same object placed at the same height on the Moon is E_{pM} and on the Earth is E_{pE} , they are then related as:

- $E_{pE} = (1/6)E_{pM}$
- $E_{pE} = 6E_{pM}$
- $E_{pE} = 0.6E_{pM}$
- $E_{pE} = E_{pM}$

B

Save & Next حفظ التالي

Question No. 11

If there is a net force acting on a moving object, the object must be:

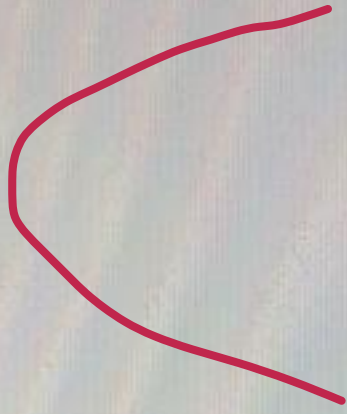
- large
- accelerating
- small
- moving with constant velocity

B

Question No. 4

In the Celsius temperature scale, water boils at:

- 373 °C
- 273 °C
- 100 °C
- 212 °C



Save & Next حفظ والتالي

Question No. 6

Gravitational potential energy of an object is due to its:

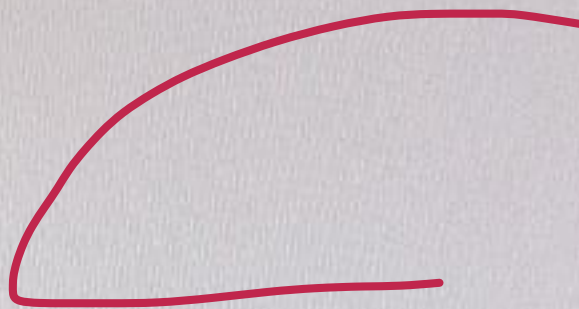
- velocity
- position
- acceleration
- temperature

B

Question No. 12

A temperature of 50 °F equals:

- 50 °C
- 323 °C
- 10 °C
- 223 °C

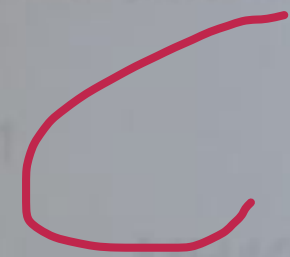


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Question No. 9

Work is defined as the product of (force in the direction of motion) and:

- time
- acceleration
- displacement
- velocity



Total questions in exam: 25 | Answered: 0

Question No. 7

The weight of a 100-kg man on the Moon is (use $g = 1.6 \text{ m/s}^2$):

- 1000 N
- 160 N
- 980 N
- 100 N

B

Question No. 1

If no external forces act on a moving object, it will have:

- increasing acceleration
- zero acceleration
- increasing velocity
- zero velocity

B

Total questions in exam: 25 | Answered: 0

Question No. 15

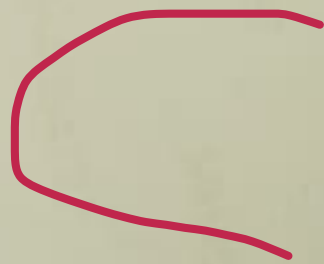
In the Fahrenheit temperature scale, the absolute zero (0 K) is approximately at.

- 0 °F
- 273 °F
- 460 °F
- 273 °F

Question No. 1

A temperature difference of 100 degrees Celsius is equivalent to a temperature difference of 180 degrees Fahrenheit. This means that a temperature difference of 20 degrees Celsius is equivalent to

- 135 degrees Fahrenheit
- 25 degrees Fahrenheit
- 36 degrees Fahrenheit
- 72 degrees Fahrenheit



0

8	2	3	4
15	9	10	11
22	16	17	18
23	24	19	25

Question No. 1

A 50-g bullet is fired from a gun with 4-kJ kinetic energy. Its velocity is

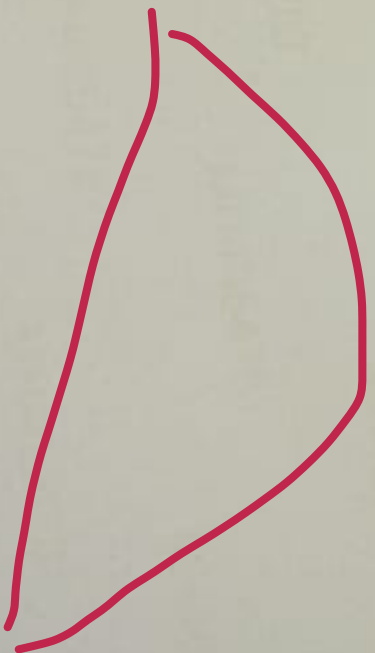
- 300 m/s
- 200 m/s
- 500 m/s
- 400 m/s

D

Question No. 15

Two workers push in the same direction on a box against a frictional force of 700 N. If one pushes with a force of 500 N and the other with a force of 600 N, the net force is:

- 800 N
- 1800 N
- 600 N
- 400 N



0

1	2	3
8	9	10
15	16	17
22	23	24
	25	18
		19

Question No. 15

A temperature of 50 °F equals:

- 323 K
- 223 K
- 283 K
- 10 K

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Question No. 13

Neglecting air resistance, if a stone is thrown straight up with initial speed = 30 m/s, it will reach its maximum height after (use $g = 10 \text{ m/s}^2$):

- 3 s
- 1 s
- 6 s
- 10 s

Save & Next حفظ والتالي

A

User: MC4053873

Number of main questions:
Number of questions:

21 Answered
0 Not Visited

1	2	3	4
8	9	10	11
15	16	17	18
22	23	24	25

Calculator

HP L1710

Handwritten notes on a piece of lined paper:

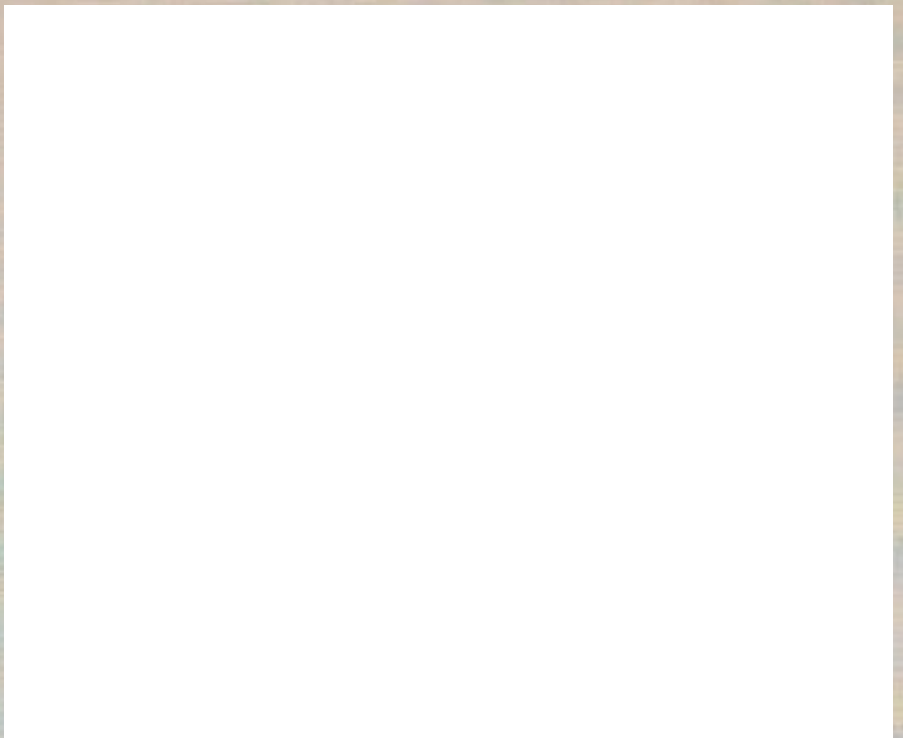
$v_f = 0$
 $v_i = 30 \text{ m/s}$
 $a = -g = -10 \text{ m/s}^2$
 $v_f = v_i + at$
 $0 = 30 - 10t$
 $10t = 30$
 $t = 3 \text{ s}$

(Note: The handwritten calculation above contradicts the selected answer '10 s' on the screen.)

Question No. 3

As an object is freely falling, its downward speed is:

- constant
- increasing
- zero
- decreasing



B

Question No. 7

An object has a weight ($mg = 10 \text{ N}$). It moved by the effect of a single force of 20 N . The acceleration of the object is:

- 10 m/s/s
- 2 m/s/s
- 5 m/s/s
- 20 m/s/s

$$mg = 10$$

$$\frac{m(10) = 10}{10 \quad 10}$$

$$m = 1$$

$$F = am$$

$$a = \frac{F}{m}$$

$$= \frac{20}{1}$$

$$= 20$$



Question No. 8

An object that has big inertia must have:

- big mass
- small mass
- big area
- big volume



A

Question No. 4

A falling object is in free fall if we can neglect :

- gravity
- the object's mass
- the object's weight
- air resistance

الهكك
تقلد



Question No. 2

Assume that you were driving with a constant speed of exactly 120 km/h for 5 minutes. During this time your instantaneous speed is:

- 120 km/h
- 120 m/s
- 60 km/h
- 100 km/h



Save & Next حفظ و التالي

Instructions

End Test

User ID: []

Number of questions: 1

1 Answered

23 Not Visited

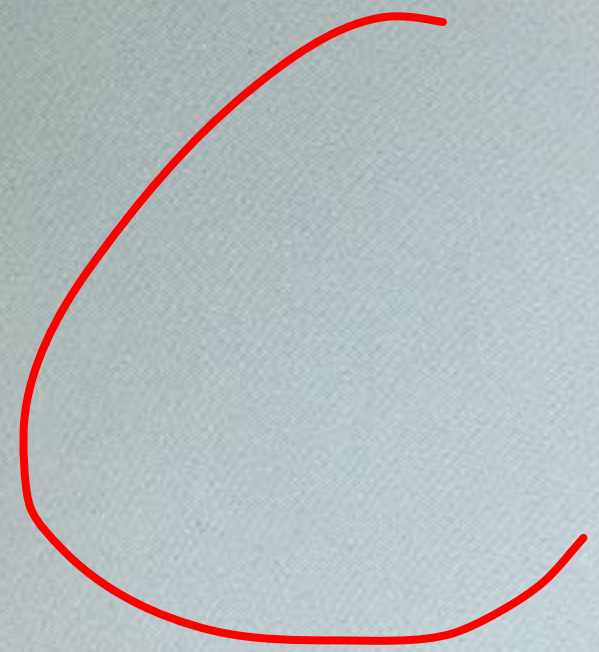
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25			



Question No. 1

An object travels in straight line with a constant speed of 40 m/s for 20 minutes. During this time, its acceleration is:

- 0.5 m/s/s
- 1 m/s/s
- 0 m/s/s
- 2 m/s/s



Question No. 17

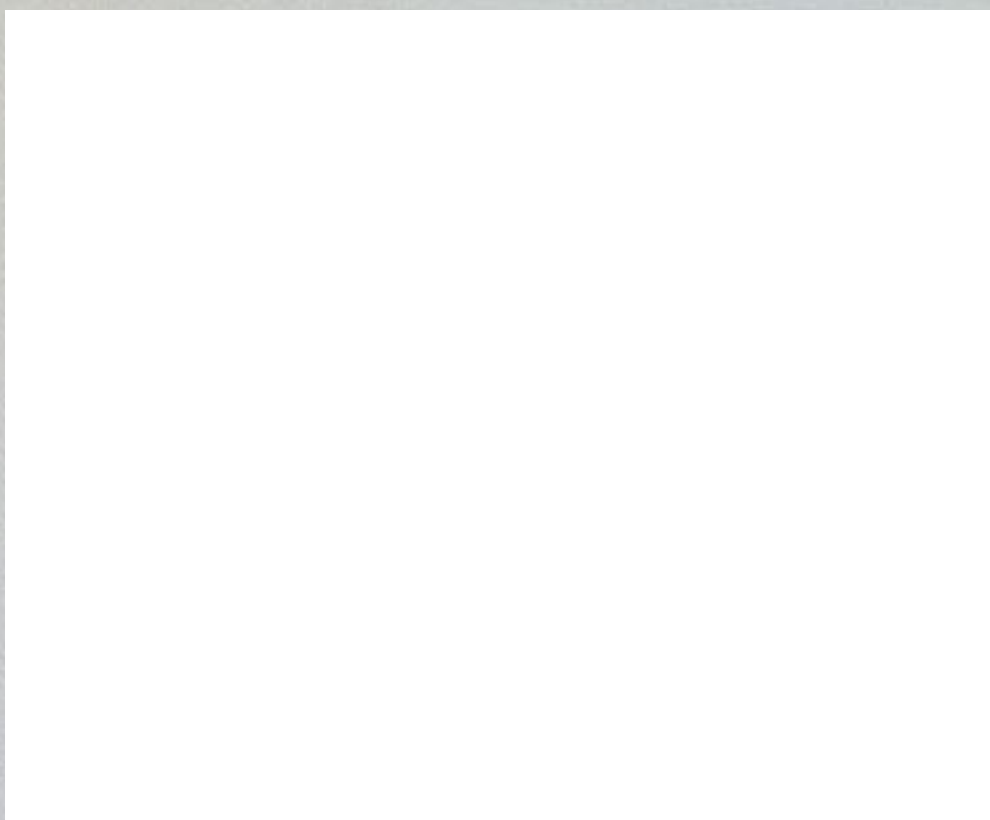
If we pushed a 100-kg box with a 500-N force and it didn't move then the work done on the box was:

- 500 J
- 50000 J
- 0 J
- 5000 J

Question No. 16

Power is defined as the:

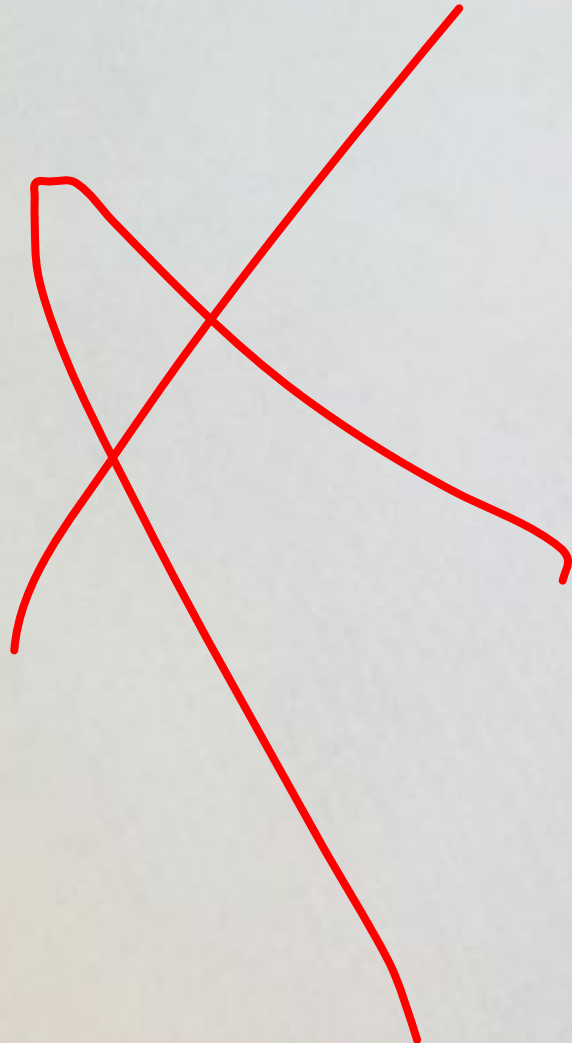
- force per unit time
- force \times distance
- energy \times time
- rate of doing work



Question No. 23

A temperature of 300 K equals:

- 81 °F
- 512 °F
- 573 °F
- 17 °F



An object has a weight ($mg = 10 \text{ N}$). It moved by the effect of a single force of 20 N . The acceleration of the object is:

- 5 m/s²
- 10 m/s/s
- 20 m/s/s
- 2 m/s/s



Question No. 4

After a falling object reaches terminal speed its speed is

- decreasing
- zero
- increasing
- constant

تا کدرینه :

D

Question No. 27

A substance should lose heat to change from

- gas to liquid
- solid to liquid
- solid to gas
- liquid to gas

A

Total questions in exam: 40 | Answered: 2

Question No. 32

If a man pushes a 100-kg box on a level floor and the box moves with constant velocity, the push force on the box is: (given: coefficient of friction $\mu = 0.2$)

- 1000 N
- 100 N
- 50 N
- 200 N

D

Total questions in exam: 40 | Answered: 6

Question No. 28

Freezing is the change of phase from

- liquid to gas
- gas to liquid
- liquid to solid
- solid to liquid

C

Question No. 14

If a stone drops in a free fall from the edge of a mountain, its acceleration is approximately

- 10 m/s/s
- 19.6 m/s/s
- 4.9 m/s/s
- 0 m/s/s

A

Question No. 1

A train travels a distance of 600 kilometers in 4 hours. Its average speed is:

- 150 km/h
- 250 km/h
- 200 km/h
- 100 km/h

$$600 \div 4 = 150 \text{ km/h}$$

A

Question No. 4

If an object is **not** in free fall, before it reaches terminal speed, its acceleration is:

- more than g
- equal to g
- less than g
- zero

C

Question No. 8

Joule/second is a unit of:

- Energy
- Work
- Power
- Temperature



Question No. 17

If you pushed a wall and it did not move, we can say that there is

- work done on your muscles
- no force acted on your muscles
- work done on the wall
- no force acted on the wall

* رضاً في السليدات

A

Question No. 25

How many kilo-joules of heat Q must be given off by 15 kg of iron (specific heat = 481 J/kg $^{\circ}$ C) to cool from 105 to 55 $^{\circ}$ C?
 ΔT

- 361 kJ
- 23 kJ
- 17 kJ
- 111 kJ

$$Q = cm \Delta T$$

$$Q = 481 \times 15 \times 50 = 360750 \text{ J}$$

$$\approx 361 \text{ kJ}$$

A

Question No. 5

Friction on a **non-moving** object is called:

- terminal friction
- kinetic friction
- dynamic friction
- static friction

P

Question No. 15

The height a 20-kW motor can lift a 1000-kg mass to in 10 seconds is:

- 20 m
- 30 m
- 10 m
- 40 m

A

Question No. 28

With no air resistance and no friction, a swinging pendulum would:

- swing only 10 times
- swing forever
- swing for short time
- swing just once

B

Question No. 8

An object that has small inertia must have

small mass

small area

small volume

big mass

A

Question No. 15

If the velocity of an object doubles, its kinetic energy

- doubles
- quadruples (becomes four times)
- does not change
- triples (becomes three times)

B

Question No. 3

An object travels in straight line and decreases its speed uniformly from 40 m/s to a full stop within 10 seconds. Its deceleration is:

- 3 m/s/s
- 4 m/s/s
- 2 m/s/s
- 1 m/s/s

$$v_f = v_i + at$$
$$a = \frac{v_f - v_i}{t} = \frac{0 - 40}{10} = -4 \text{ m/s}^2$$

B

Question No. 3

The change of phase from liquid to solid is:

- condensation
- solidification
- melting
- vaporization

B

Question No. 1

The heat of fusion of a substance is the heat that 1kg of that substance needs to

- condense
- heat up
- vaporize
- melt

D