Don't look back,
you're not going
that way.

تجميعات ميد ثاني

فيزياء (محلول)

2020-1441

محلولة مع طريقة الحل

دعواتكم

D&S

Eng.dhoom

MKCL OES
Online Evaluation System

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

B

Question No. 23

The coefficient of friction is always:

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

A

Question No. 21

A substance should lose heat to change from

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

A

A

C

Question No. 5

The friction force always acts in a direction:

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

C

otal questions in exam: 25 | Answered: 6

Question No. 4

When you fire a bullet from a handgun, the recoil you feel is called the:

- action
- the fraction of force
- gravitation attraction
- reaction

D

Total questions in exam: 25 | Answered: 3

Question No. 3

A car is moving with 60 km/h for 20 min and then with 90 km/h for another 40 min and then took a rest for 30 min. The car then continues with 120 km/h for three hours. The average speed for this journey is approximately

- 66.7 km/h
- 90 km/h
- 97.8 km/h
- 70 km/h

60 km/h
$20 \rightarrow \frac{1}{3}$ h
$d = 20$

90 km/h
$40 \rightarrow \frac{2}{3}$
$d = 60$

0 km/h
$30 \rightarrow \frac{1}{2}$
$d = 0$

$20 + 60 + 0 + 360$

$\frac{1}{3} + \frac{2}{3} + \frac{1}{2}$

$+ 3$

Save & Next

120 km/h
3
d = 360

MKCL OES

Physics_Quiz2_Sem1_2019

Total questions in exam: 25 | Answered: 0

Question No. 3

A car is moving with 100 km/h for 30 min and then took a rest for 30 min. The car then continues 100 km/h for two hours. The average speed for this journey is approximately:

- 75 km/h
- 100 km/h
- 110 km/h
- 83.3 km/h

100
1/2 = 50

0
1/2 = 0

100
2 = 200

Save & Next

نفس الطريقة

Question No. 14

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

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

Total questions in exam: 25 | Answered: 5

Question No. 1

Condensation is the change of phase from

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

C

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

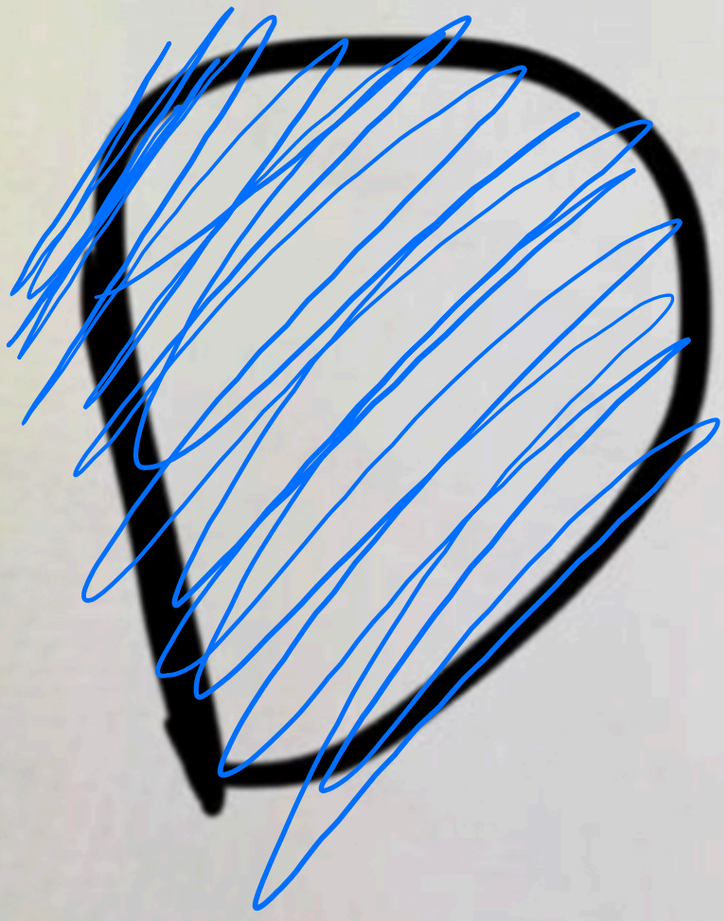
Save & Next

Total questions in exam: 25 | Answered: 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



Question No. 1

Newton's third law states that for a force (F1) applied from object A on object B, there is a force (F2) applied from B on A such that:

- F1 + F2 = 1
- magnitude of F1 < magnitude of F2
- magnitude of F1 = magnitude of F2
- magnitude of F1 > magnitude of F2

C

Save & Next

MKCL OES

Total questions in exam: **25** | Answered: **0**

Question No. 1

During change of phase of a substance, its temperature

- changes rapidly
- decreases
- increases
- remains constant

D

Save & Next

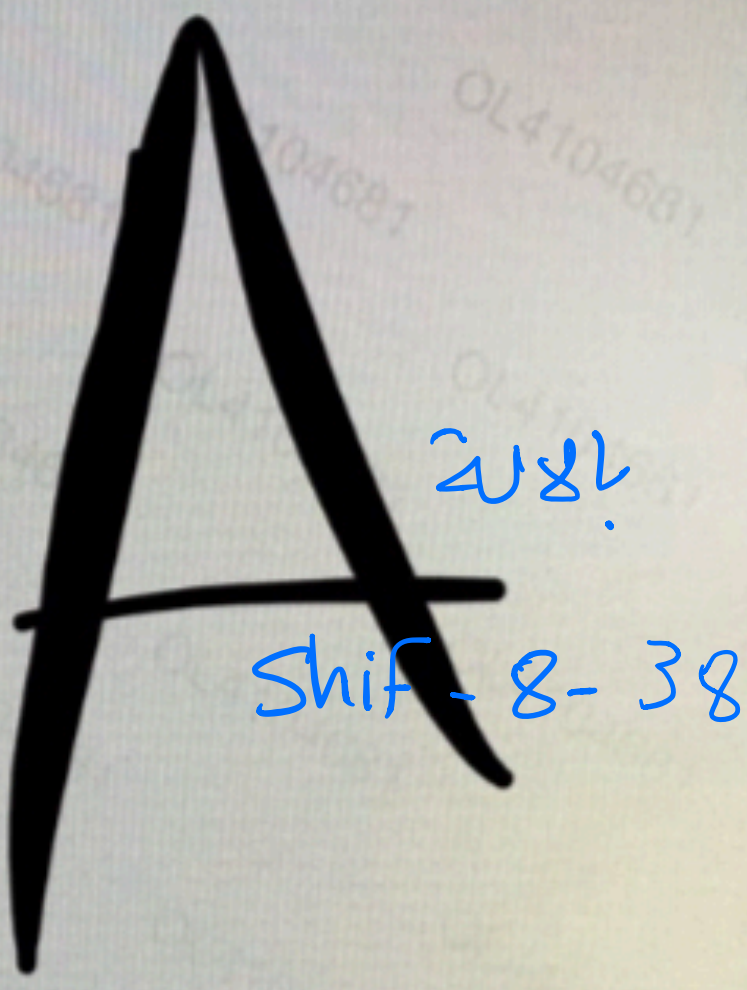
192.168.6.20

Total questions in exam: **25** | Answered: **0**

Question No. 2

A temperature of 150 °C equals:

- 302 °F
- 320 °F
- 203 °F
- 220 °F



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Total questions in exam: 25 | Answered: 3

Question No. 17

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

1. $V_f = V_i + a.t$	2. $V_f = \sqrt{2gh}$	3. $V_{avg} = \frac{d}{t}$
4. $V_f = g.t$ ($v_i = 0$)	5. $V_{avg} = \frac{V_f + V_i}{2}$	6. $\beta = \frac{\Delta}{t}$

- 6
- 1
- 2
- 3 or 5

D

D

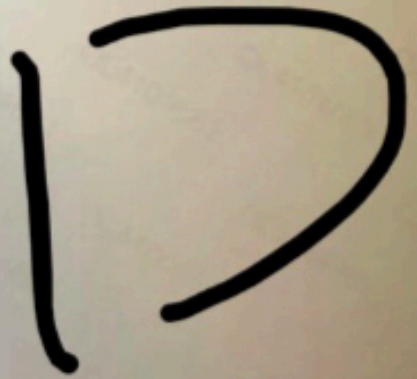
Save & Next

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



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

HP Compaq LE1711

Question No. 13

A substance should absorb heat to change from

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

تمتص

B

Save & Next

Question No. 7

نحول واط → 20000

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

$$P = \frac{w}{t} = \frac{mgh}{t} =$$

نحط في الالة تكتب نفس

الارقام بس لازم h

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:

500 + 400 − 700

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

B

Save & Next

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

Question No. 20

If you do a work of 280 J to place a 10 kg box on top of a shelf, the height of this shelf is:

- 1.9 m
- 2.5 m
- 1.0 m
- 2.8 m

$w = 280$

$m = 10$

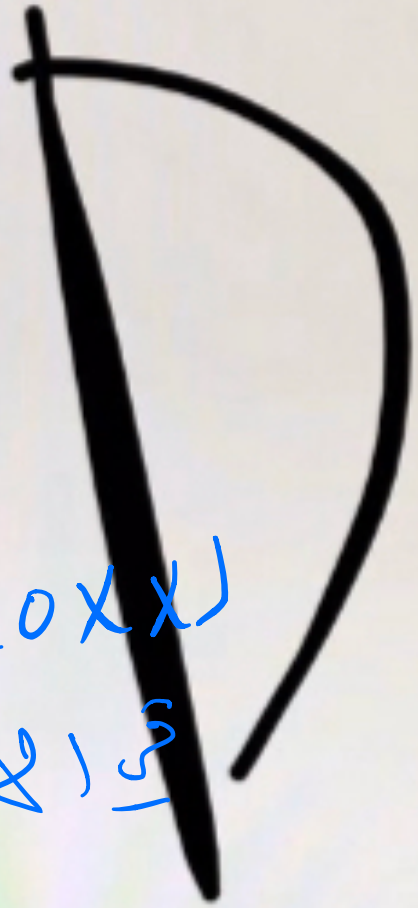
$g = 10$

$h = ?$

$W = mgh$

$280 = (10 \times 10 \times x)$

$x = 2.8$



Save & Next

Total questions in exam: 25 | Answered: 3

Question No. 22

A-

The unit of the coefficient of friction is:

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

D

Save & Next

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Physics_Quiz2_Sem1_2019

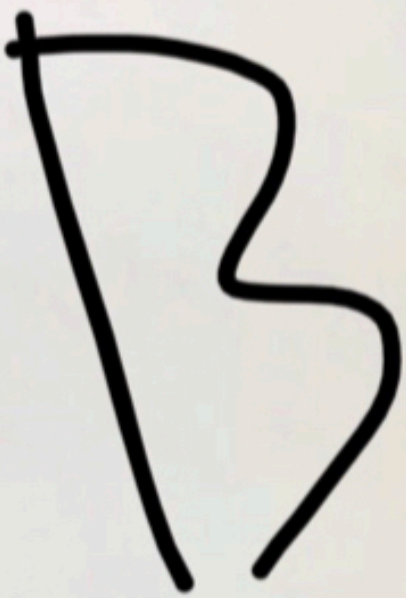
Total questions in exam: 25 | Answered: 3

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

B



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Physics_Quiz2_Sem1_2019

Total questions in exam: 25 | Answered: 3

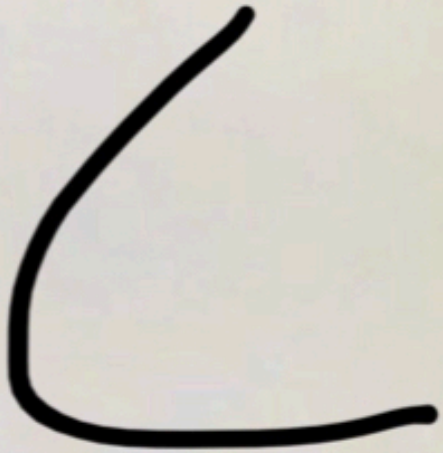
Question No. 24

A⁻ A A⁺

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.

C



Save & Next

Question No. 21

The kinetic energy of a 2-kg object is 1 J. When this kinetic energy is tripled (becomes three times), the speed is:

- 4.4 m/s
- 2.4 m/s
- 1.7 m/s
- 3.7 m/s

$KE = 1j$

$m = 2kg$

$3 = \frac{1}{2}(2)(x)(x)$

$= C$

Save & Next

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

$t = ?$

$P = 8$

$m = 1000$

$h = 10$

$$P = \frac{w}{t} = \frac{mgh}{t}$$

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

$m = 1500$

$E_K = 780000$

$V = ?$

1 $E_K = \frac{1}{2} m V^2$

2 $V = \sqrt{\frac{E_K \times 2}{m}}$

3 $V = \sqrt{\frac{780000 \times 2}{1500}}$

4 $V \approx 32$ m/s

* لازم نحول m/s → km/h

$\frac{32 \times 3600}{1000}$

$= 115.3$ km/h

≈ 116 km/h

Question No. 3

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

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

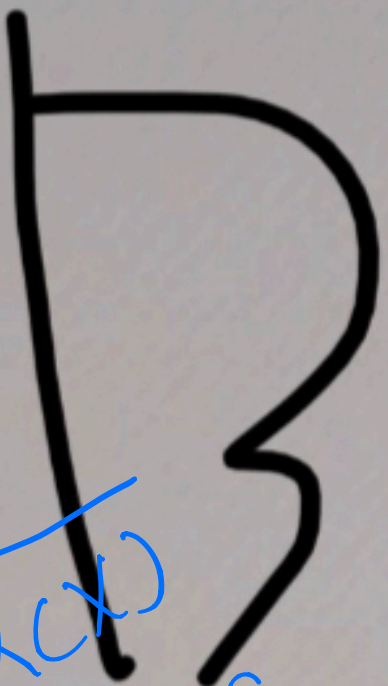
$v = 10$

$g = 10$

$v = \sqrt{2gh}$

$10 = \sqrt{2 \times 10 \times h}$

$h = 5\ m$



Question No. 6

"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

Total questions in exam: 25 | Answered: 5

Question No. 20

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

- Joule
- BTU
- Calorie
- Fahrenheit

D

Physics_Quiz2_Sem1_2019

Total questions in exam: 25 | Answered: 3

Shif - 8 - 20

Question No. 25

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

$V_{avg} = 40 = 144$

$t = 5$

$d = ?$

$v = \frac{d}{t}$?

$\frac{144}{1} = \frac{?}{5}$

$144 \times 5 = 720$

Save & Next

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MXCL OES

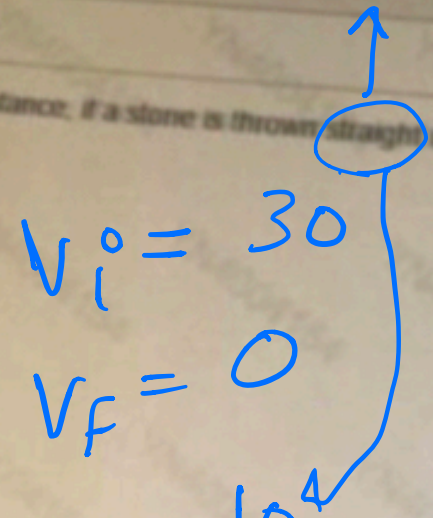
Physics_Qu

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



$V_i = 30$

$V_F = 0$

$a = -10$

$t = ?$

من المعادلات لدينا 6

معادلة 2

نشتق من القانون

$$t = \frac{V_F - V_i}{a}$$

بالآلة

Physics_Quiz2_Sem1_2019

Total questions in exam: 25 | Answered: 23

Question No. 4

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

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

Save & Next

MKCL OES

Physics_Quiz2_Sem1_

Total questions in exam: 25 | Answered: 0

A⁻ A A⁺

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

D

الطريقه عندنا

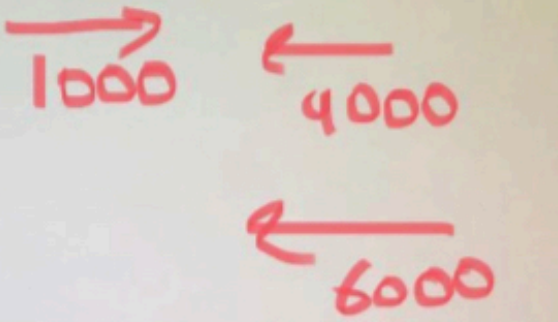
g و h

Question No. 9

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

A



Total questions in exam: 25 | Answered: 23

Question No. 3

A- A A+

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

$KE = ?$

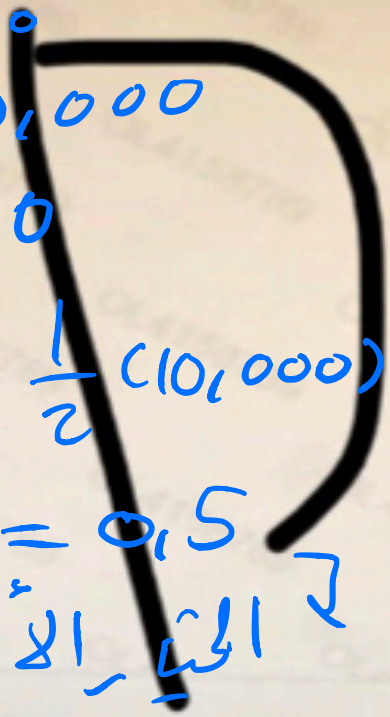
$m = 10{,}000$

$V = 10$

$KE = \frac{1}{2}(10{,}000)X(10)^2$

$= 0.5$

الجواب الأقرب



Save & Next

Physics_Quiz2_Sem1_2019

Question No. 2

A large steel wrecking ball is raised to a height of 25 m in 20 s using a power of 3000 W. The mass of the ball is:

- 240 kg
- 20 kg
- 100 kg
- 200 kg

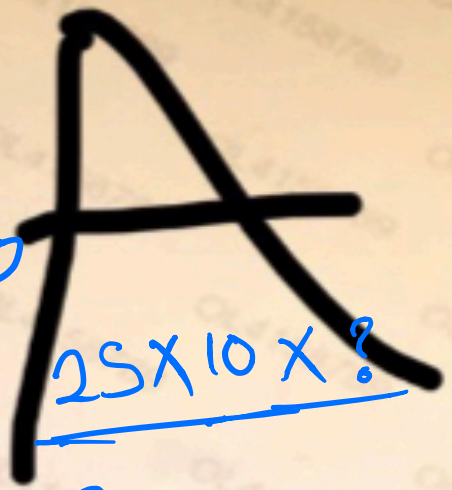
A

$h = 25$

$t = 20$

$P = 3000$

$3000 = \frac{25 \times 10 \times ?}{20}$



Save & Next

Physics_Quiz2_Sem1_2019

Question No. 5

If a net force of 100 N causes a crate to accelerate at 0.9 m/s/s, the crate's mass is:

- 80 kg
- 11 kg
- 111 kg
- 50 kg

C

$F = 100$

$a = 0.9$

$F = m \cdot a$

$100 = (X) \times (0.9)$

Save & Next

MKCL OES

Question No. 8

An object that has small inertia must have:

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

A

Question No. 6

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

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

C

Question No. 23

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

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

A

Question No. 4

For non-freely falling objects, terminal velocity means:

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

A

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.

C

MKCL OES

Total questions in exam: **25** | Answered: **12**

Question No. 14

If a bullet is fired from a handgun with a force F1, the handgun recoils (तरंत) 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

D

Total questions in exam: **25** | Answered: **0**

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

1 $V_i = 0$

$V_F = 30$

$t = 10$

$a = \frac{30}{10} = 3$

2 $S = ?$, $m = 1500$

5 قانون معادلة

150 بطلع

3 $P = \frac{W}{t}$ → mas =

4 $P = \frac{1500 \times 3 \times 150}{10}$

$P = 67.5$

«طريقة حل المسائل بالآلة»

* مثال قال القوة (F) 100 والتسارع (a) 2
يبغى الكتلة (m):

1) القانون ← $F = ma$

2) نعوض ← $100 = m \times 2$

3) الحل بالآلة:

100 Alpha = (Alpha X) X (2)

shift calc "solve"

50 ← الناتج

«طريقة تحويل بعض الوحدات بالآلة»

* نسألها قوها فعطاية الآلة

* «التحويل المطلوب 8 Shift»