

فيزياء الميد الاول

2019

مریم جدو ♥ دعواتکم

Total questions in exam: 25 | Answered: 2

Question No. 7

A<sup>-</sup> A A<sup>+</sup>

For  $n_1 = 0.6789$ ,  $n_2 = 0.067890$ ,  $n_3 = 0.607890$ , and  $n_4 = 607.89$ , the number with equal significant figures are:

4 S.F.    5 S.F.    6 S.F.    5 S.F.

- n1 and n2
- n1 and n3
- n2 and n4
- n3 and n4

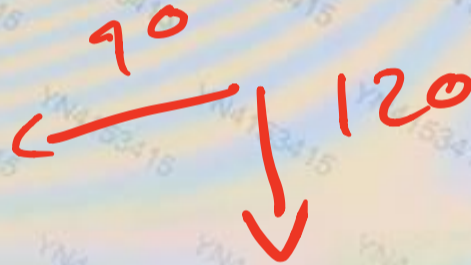
C

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Question No. 1

Two forces are: ( $F_1 = 90 \text{ N}$ , west) & ( $F_2 = 120 \text{ N}$ , south). Their resultant ( $R$ ) is:

- (210 N, north of east)
- (30 N, south of west)
- (150 N, south of west)
- (150 N, south of east)



$$\sqrt{90^2 + 120^2}$$

$$= 150$$

والا اتجاه يكون دسمبور  
بين المتجهين الاكبر قيمة ثم الاكبر

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Question No. 2

The dimensions of (mass/speed) is:

- ML<sup>1</sup>
- ML<sup>-1</sup>T
- ML
- ML<sup>-2</sup>T

B

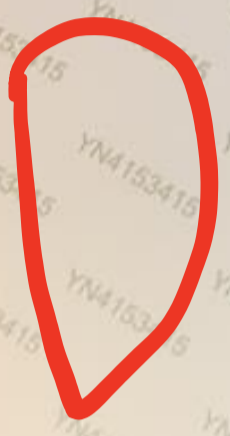
$$\frac{M}{\sqrt{T}} = ML^{-1}T$$

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Question No. 3

Express 1000 in. in centimeters (1 in. = 2.54 cm):

- 394 cm
- 3940 cm
- 254 cm
- 2540 cm



$$1 \text{ in} \rightarrow 2.54$$
$$1000 \rightarrow x$$

$$(2.54)(1000) = 2540 \text{ cm}$$

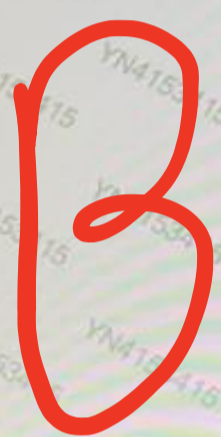
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Question No. 4

Example of a scalar is:

- weight
- distance
- displacement
- acceleration

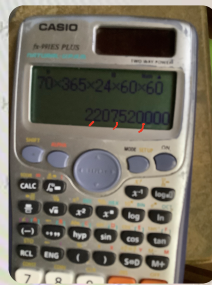


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Question No. 5

Consider that the average age of a human is 70 years and on average, the heart beats once every second. During this lifetime, the heart approximately beats:

- 200 million beats
- 20 million beats
- 20 billion beats
- 2 billion beats



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User: YN4153415

Number of exam questions: 25

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0	Answered	5	Not Answered
20	Not Attempted	0	Partially Answered

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			

Calculator

Notepad

Question No. 6

Knowing that 1 ft = 12 in. and 1 in. = 2.54 cm, a distance of 20 ft is equal to:

- 61000 cm
- 610 cm
- 6100 cm
- 61 cm

B

1st  $\rightarrow$  12 in  
~~20  $\rightarrow$  x~~  
 200 in

1 in  $\rightarrow$  2.54 cm  
~~200  $\rightarrow$  x~~  
 $= 609.6 \approx 610$

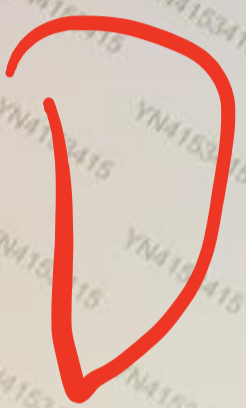
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Question No. 7  
Three forces are: ( $F_1 = 63 \text{ N, east}$ ), ( $F_2 = 42 \text{ N, west}$ ) & ( $F_3 = 13 \text{ N, west}$ ). Their resultant ( $R$ ) is

- 24 N, east
- 79 N, east
- 8 N, west
- 8 N, east



$42 + 13 = 55$

$63 - 55 = 8 \text{ east}$

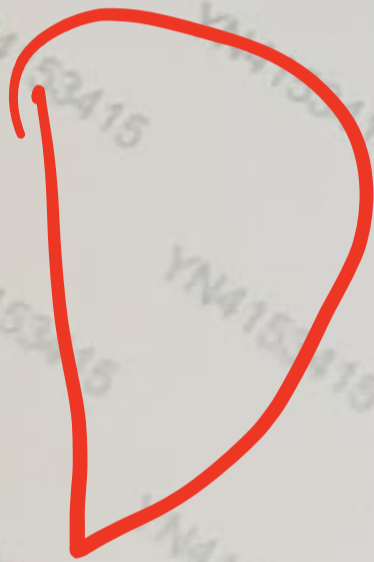
انجد القوة الناتجة الى اليمين 8 نيوطن



Question No. 9

An object will have a zero acceleration if:

- only the speed is constant
- only the direction is constant
- both the speed and direction are changing
- both the speed and direction are constant



Question No. 8

"Good precision" is an instrument's ability to give measurements that are:

- random
- always scattered
- repeatedly close to each other
- repeatedly far from each other

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Question No. 10

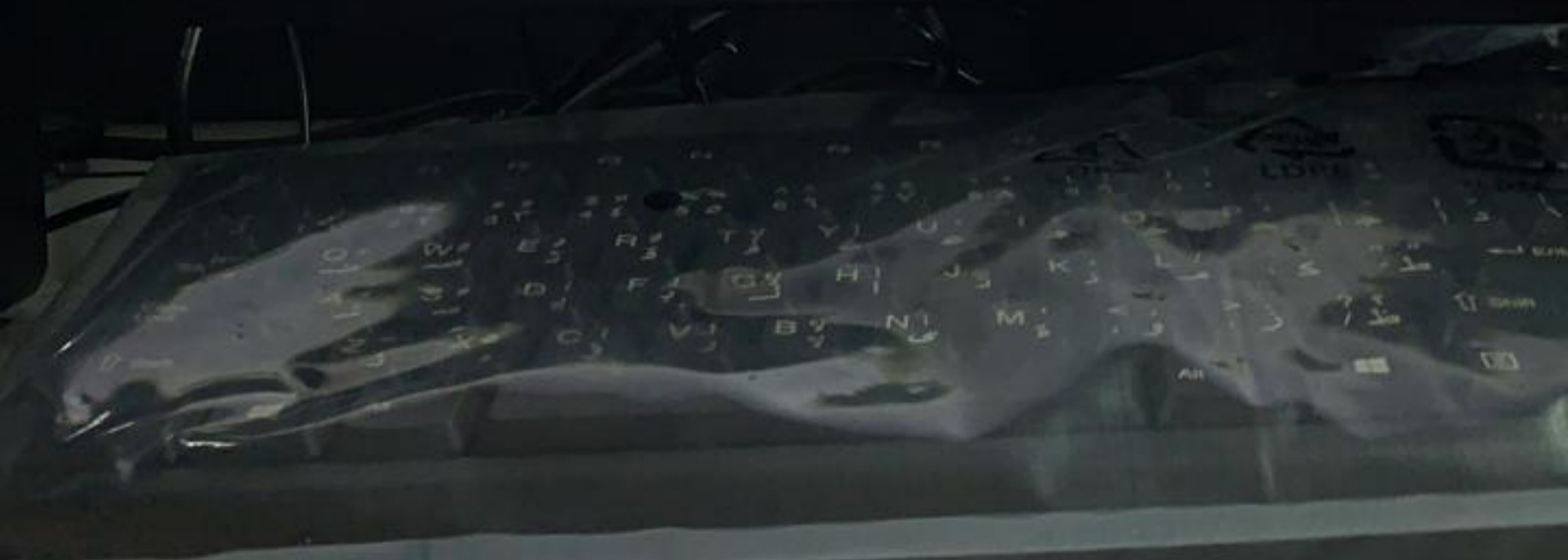
If one light-year (سنة ضوئية) is the distance light travels in 1 year, one year  $\approx 3 \times 10^7$  s, and the speed of light in space is  $(3 \times 10^8$  m/s), one light-year is approximately:  
(distance = speed  $\times$  time)

- $10^{10}$  m
- $10^{12}$  m
- $10^{16}$  m
- $10^{14}$  m

*time*  
 $(3 \times 10^8) \times (3 \times 10^7)$   
 $= 9 \times 10^{15} \approx 10 \times 10^{15} \approx 10^{16}$   
*speed*



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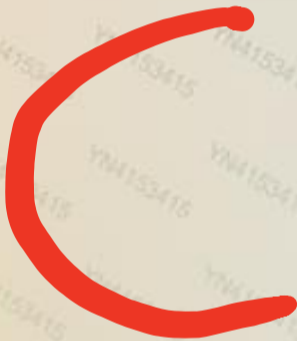


Question No. 11

You bought a car for 90500 Saudi riyals (SAR). In order-of-magnitude this price is about:

- SAR  $10^6$
- SAR  $10^4$
- SAR  $10^5$
- SAR  $10^2$

$9 \times 10^4 \approx 10^5 \times 10^0 \approx 10^5$



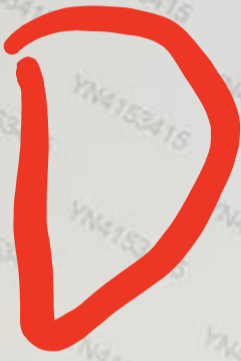
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Question No. 13

In the SI system of units, the mass, length and time are, respectively, measured in:

- pound, meter and second
- kilogram, foot and second
- pound, foot and second
- kilogram, meter and second



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Question No. 14

In scientific notation we write the number 222.1 as:

- $2.221 \times 10^2$
- $0.221 \times 10^2$
- $22.21 \times 10^2$
- $2.221 \times 10^3$

A

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Question No. 12

If  $r$  is a length,  $A$  is an area and  $V$  is a volume, the equation  $A \cdot r^n = r^3/V$  is dimensionally correct if  $n$  equals

- 6
- 6
- 5
- 5

B

$$L^2 \cdot L^1 = L^n \cdot L^{-3}$$

$$L^3 = L^n \cdot L^{-3}$$

$$n - 3 = 3$$

$$n = 3 + 3$$

$$n = 6 \checkmark$$

$$L^3 = L^6 \cdot L^{-3}$$

$$L^3 = L^{6-3} = L^3 \checkmark$$

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## Question No. 15

A lake with approximately circular surface has an average radius  $r = 0.25$  km and average depth  $h = 5$  m.  
The volume  $V = \pi r^2 h$  of this lake in liters (L) is approximately:

- $10^{12}$  L
- $10^7$  L
- $10^9$  L
- $10^5$  L

$$r = 0.25 \text{ km} \approx \underline{250 \text{ m}}$$

$$V = (3.14)(250)^2(5)$$

$$V = 981250 \text{ m}^3 \xrightarrow{\text{L}} \times 1000$$

$$= 981250000$$

$$9 \times 10^8$$

$$= 10^9 \times 10^8$$

$$= 10^9 \quad \checkmark$$

Total questions in exam: 25 | Answered: 22

Question No. 16

If  $r$  is a length,  $v$  is a speed and  $t$  is time, the equation  $v = k/t^2 + r/t$  is dimensionally correct if  $k$  has the dimension of:

- $LT^{-2}$
- $LT^{-3/2}$
- $LT^2$
- $L$

**B**

$$LT^{-1} = k \cdot T^{-2} + L T^{-1}$$

$$k = L T$$

$$= L T \cdot T^{-2} = L T^{-1}$$

Save &amp; Next

Question No. 17

Of the following SI units, the only derived unit is:

- newton
- ampere
- meter
- kelvin

A

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Question No. 18

A cylinder of platinum-iridium, kept at the Bureau of weights and Measures in France, gives the standard of:

- kilogram
- meter
- pound
- second

A

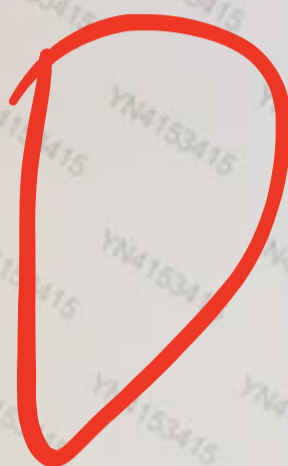
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Question No. 19

The number of decimal places in (0.012) is:

- 2
- 4
- 5
- 3



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Question No. 20

Three forces are: (F1 = 21 N, east), (F2 = 13 N, east) & (F3 = 17 N, east). Their resultant (R) is:

- 51 N, east
- 40 N, west
- 30 N, west
- 17 N, east

كله نفس الاتجاه! جمع  
 $21 + 13 + 17 = 51$

A

Save & Next



Question No. 21

The percent uncertainty in the measurement  $m = 22.5 \pm 0.5$  g is:

- 1%
- 2%
- 5%
- 3%

$$\frac{0.5}{22.5} \times 100 = 2.2\% \approx 2\%$$

B

Save & Next



Question No. 22

When making measurements, the result of subtracting 7.5 from 25.578 is correctly written as:

- 18.078
- 18.1
- 18
- 18.08

B

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Total questions in exam: 25 | Answered: 23

Question No. 23

The distance from Madinah to Riyadh is measured to be accurately 830 km. The number of significant figures in this measurement is:

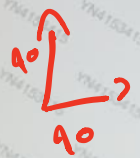
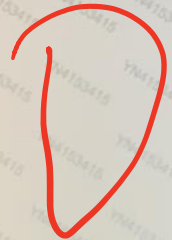
- 1
- 2
- 3
- 4

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Question No. 24

Two forces are: ( $F_1 = 90\text{ N}$ , up) & ( $F_2 = 90\text{ N}$ , right). The magnitude of the resultant ( $R$ ) is nearly.

- 0 N
- 90 N
- 180 N
- 127 N



$$\sqrt{90^2 + 90^2} = 127$$

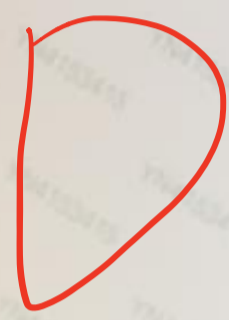
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Question No. 23

The dimensions of (area×time) is:

- $ML^2T^2$
- $ML^2$
- $LT$
- $L^2T$



$L^2T$

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Question No. 18

A cylinder of platinum-iridium, kept at the Bureau of weights and Measures in France, gives the standard of:

- kilogram
- meter
- pound
- second

AI

Save & Next



## Question No. 16

A car in linear motion accelerating at a rate of 2 m/s/s reaches a speed of 30 m/s in 5 seconds. speed is:

- 25 m/s
- 20 m/s
- 10 m/s
- 40 m/s

B

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

$$2 = \frac{30 - v_i}{5}$$

$$10 = 30 - v_i$$

$$v_i = 30 - 10$$

$$= 20 \text{ m/s}$$

Save & Next