

Shagaf

Physics Final

Done By:

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1.)Which of the following is a unit of force?

- A.Gram.
- B.Kg.
- C.Pound.
- D.Slug.

Answer"C.Pound"

2.)A nucleus is denoted by ${}^5X^{12}$,How many Protons?

- A.12
- B.5
- C.7
- D.17

Answer"B.5"

3.)The radius of water pipe decrease from 0.2 m to 0.1 m.
If the average velocity in wider portion is 5m/s,
find the average velocity in the narrower portion

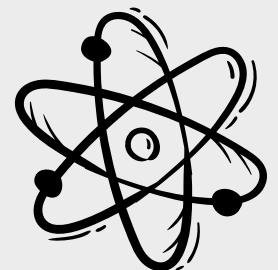
- A.24m/s.
- B.12m/s.
- C.16m/s.
- D.20m/s.

Answer"D.20m/s"

4.)A child throws a ball so that it rises 5m while travelling 7m horizontally in 2s and then begins to drop.What is the magnitude of the initial velocity?

- A.13.94 m/s.
- B.11.06 m/s.
- C.10.5 m/s.
- D.12.98 m/s.

Answer"C.10.5 m/s"



5.)If $A=8X+Y$ & $B=4X+Y$!What is the magnitude of the resultant?

- A.12.85.
- B.14.40.
- C.16.19.
- D.12.16.

Answer"D.12.16"

6.)A parachutist of weight w strikes the ground and moved up with $a=5g$, find the force exerted by the ground on him

- A.6w.
- B.7w.
- C.4w.
- D.5w.

Answer"A.6w"

7.)The average flow rate of blood in the aorta is $6.2 \times 10^{-6} \text{ m}^3/\text{s}$ and it has a radius of $1.3 \times 10^{-2} \text{ m}$, the viscosity of blood is ($2.084 \times 10^{-3} \text{ pa.s}$), The average blood velocity is?

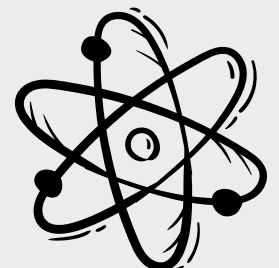
- A. 13.6×10^{-3} .
- B. 7.9×10^{-3} .
- C. 9.8×10^{-3} .
- D. 11.7×10^{-3} .

Answer"D.11.7×10⁻³"

8.)From the information of problem 7 , What is the flow resistance per 3m long?

- A. 5.58×10^5 .
- B. 7.44×10^5 .
- C. 1.86×10^5 .
- D. 3.72×10^5 .

Answer"A.5.58×10⁵"



9.) A man of 83 kg climbs a hill of height 7 m in 4 minutes, What is the power delivered by him?

- A. 4233.6.
- C. 1162

- B. 43200
- D. 1423.5

Answer"D. 1423.5"

10.) A concave lens of a focal length 20 cm , If an object is placed at a distance of 50 cm from the lens. Find the distance of image.

- A.(-12) cm.
- B.33.3 cm.
- C.(-14.3) cm.
- D.15 cm.

Answer"C.(-14.3) cm"

11.) A certain pressure can rise a column of pure water 0.7 m high , the same pressure will support a column of certain solution 0.3 m high, What is the density of the solution?

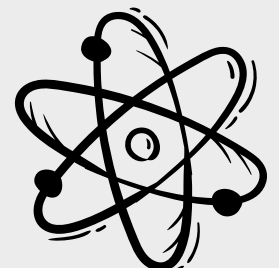
- A.1167.
- B.1750.
- C.2333.
- D.3500.

Answer"C.2333"

12.) A wire of nichrome has $r = 1\text{mm}$, $L = 2\text{m}$, $\rho = 1.09 \times 10^{-6} \Omega \cdot \text{m}$;find the potential difference (V) between the two ends when the current passing through it is 3A:

- A.2.76 V.
- B.0.69 V.
- C.1.38 V.
- D.2.07 V.

Answer"D. 2.07 V"



13.) A square hole of 16 cm long each side is cut into sheet of copper If it is heated from 50 F° to 140 F° , the calculated ΔA is:

- A. 0.435 cm².
- B. 0.280 cm².
- C. 0.109 cm².
- D. 0.245 cm².

Answer "B. 0.280 cm²"

14.) A particle start moving from origin at t=0 with $v=24x-12y$ and move (x-y) accesses with constant acceleration given by $a=3x-6y$. Find the speed at t=2

- A. 35.4.
- B. 38.4.
- C. 32.5.
- D. 41.6.

Answer "B. 38.4"

15.) Mercury will drop a distance of 13×10^{-3} m in a narrow tube , if the coefficient of the surface tension for mercury is $=0.486$ N/m , density $=13600$ kg/m³ & the contact angle is 140° , What is the radius of the tube?

- A. 1.3×10^{-2} .
- B. -4.29×10^{-4} .
- C. 1.3×10^{-3} .
- D. 4.29×10^{-4} .

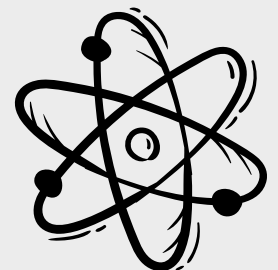
Answer "D. 4.29×10^{-4} "

16.) The resistance of a piece of aluminium is measured to be $2.8 \times 10^{-3} \Omega$, What is the resistance of a piece of glass with same dimension?

(ρ)aluminium = $2.8 \times 10^{-8} \Omega \cdot m$ (ρ)glass = $10^{10} \Omega \cdot m$

- A. $2.79 \times 10^{-15} \Omega$.
- B. $2.8 \times 10^{15} \Omega$.
- C. $2.8 \times 10^{-1} \Omega$.
- D. $10^{15} \Omega$.

Answer "D. $10^{15} \Omega$ "



17.) Which of the following radiation has negative charge?

- A. α particles.
- B. γ rays.
- C. β particles.
- D. X rays.

Answer "C. β particles"

18.) What is the pressure difference between the heart and the brain if the brain is 0.7m above heart?

- A. 1.38×10^4 .
- B. 1.54×10^4 .
- C. 7.42×10^3 .
- D. 5.30×10^3 .

Answer "C. 7.42×10^3 "

19.) Given a charge of a particle to be $Q = 2t^2 - 3t$, find the current at $t = 6$

- A. 5A.
- B. 13A.
- C. 29A.
- D. 21A.

Answer "D. 21A"

