

# FB Group: PAF TESTS PREPARATION

Physics

- 1) Dimensions of momentum  $\Rightarrow [MLT^{-1}]$
- 2) Resistivity depends upon  $\Rightarrow$  Nature of material and temperature.
- 3) Capacitance of capacitor increases with  $\Rightarrow$  to increase in area.
- 4) Velocity of a satellite is independent of  $\Rightarrow$  mass of satellite.
- 5) Formula of momentum  $\Rightarrow P = mv$
- 6) Formula of impulse  $\Rightarrow J = F \cdot t$
- 7) Kirchoff's current law  $\Rightarrow$  charge conservation.
- 8) 1 volt =  $1J/1C$
- 9) light year is a unit of  $\Rightarrow$  Distance
- 10) P-type materials are doped with  $\Rightarrow$  trivalent impurities
- 11) Dimension of velocity  $\Rightarrow [LT^{-1}]$
- 12) Which dimensions are same  $\Rightarrow$  work power and torque.
- 13) Impulse is the product of  $\Rightarrow$  force and time.
- 14) Angle subtends at  $\Rightarrow 2\pi$  radian
- 15) Angular momentum depends upon  $\Rightarrow$  mass, velocity and radius.
- 16) Find value of  $k$ , if  $f = 0.2$  or and  $r = 0.4 \Rightarrow F = kx$   
 $k = \frac{F}{x} = \frac{0.2}{0.4} = 0.5$   
 (Not confirm)
- 17) Unit of angular momentum  $\Rightarrow kgm^2/s$
- 18) Formula for angular frequency  $\Rightarrow \omega = \frac{2\pi}{T}$
- 19) Radius of nucleus  $\Rightarrow 10^{-15}$  (Not confirm) T
- 20) Formula of torque  $\Rightarrow \tau = r \times F = rF \sin \theta$ .
- 21) Dimension of stress  $\Rightarrow [ML^{-1}T^{-2}]$
- 22) Formula of stress  $\Rightarrow$  Stress =  $\frac{\text{Force}}{\text{Area}} = \frac{F}{A}$

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- 23) Formula of Kinetic Energy  $\Rightarrow$   $K.E = \frac{1}{2}mv^2$
- 24) Capacitor is used for  $\Rightarrow$  storing charge / electrical energy.
- 25) In P-type materials, majority ~~carrier~~ carriers are  $\Rightarrow$  holes.
- 26) Time period is reciprocal of  $\Rightarrow$  Frequency
- 27) Gamma rays consist of  $\Rightarrow$
- 28)  $X = A + B \Rightarrow$  OR Gate
- 29) Speed of light  $\Rightarrow$   $3 \times 10^8$  (in air)

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30) When resistance increases, what happens to resistivity  $\Rightarrow$  increases.

31) Law of thermodynamics  $\Rightarrow$  Energy can neither be created, nor be destroyed, but it can be changed from one form to another (Not confirm)

32) Range of projectile is maximum at  $\Rightarrow 45^\circ$

33) Acceleration of freely falling body  $\Rightarrow$  same ( $9.8 \text{ ms}^{-2}$ )

34) If the capacitor distance between the plates of capacitor is doubled, then the capacitance becomes  $\Rightarrow$  twice.

35) What is the length of the pendulum, if its time period is 5 sec  $\Rightarrow$

$$T = 2\pi \sqrt{\frac{L}{g}}$$

$$L = \frac{T^2 \times g}{4\pi^2}$$

$$L = \frac{(5)^2 \times (9.8)}{4(3.14)^2}$$

$$L = 6.21 \text{ m}$$