



# PHYSICS

## BOOKS - JBD PUBLICATION

### Model Test Paper 13

#### Exercise

1. Force of friction is measured in:

A. Newton

B. Joule

C. Watt

D. Ohm

**Answer:**



**Watch Video Solution**

2. The collision between a bat and ball is

.....



**Watch Video Solution**

3. velocity of a moving body can be zero.(yes/  
No)



[Watch Video Solution](#)

4. Give the location of the centre of mass of a  
:- ring.



[Watch Video Solution](#)

5. What is force of vibration?



[Watch Video Solution](#)

6. Explain one use of dimensional analysis by giving an example.



[Watch Video Solution](#)

7. The resistance  $R = V/i$ . If  $V = (100 \pm 5)$  volt and  $I = (10 \pm 0.2)$  A. Find the percentage error in  $R$ .



[Watch Video Solution](#)

8. If  $\vec{A} = 2\hat{i} + 3\hat{j} + \hat{k}$ ,  $\vec{B} = 2\hat{i} - 2\hat{j} + 3\hat{k}$ ,

calculate  $\left| \vec{A} \times \vec{B} \right|$



[Watch Video Solution](#)

9. A force of 100 N is able to produce an acceleration  $8\text{ms}^{-2}$  in a body of mass 10 kg. Find the value of force of friction.



[Watch Video Solution](#)

**10.** Explain conservative force with examples.



**Watch Video Solution**

**11.** The net external torque on a system of particles about an axis is zero. Which of the following are compatible with it?



**Watch Video Solution**

**12.** What is geostationary satellite ?Write its two applications.



[Watch Video Solution](#)

**13.** If a person stands near a fast moving train, there is a possibility of his falling towards it. Why?



[Watch Video Solution](#)

**14.** When a projectile is projected at an angle with the horizontal, find the angle of projection for its maximum horizontal range

and find the correspondg height achieved by the projectile?



[Watch Video Solution](#)

**15.** A body travels 200 m in 2 seconds and 220 m in the next 4 seconds. What will be its velocity at the end of the 7th second from the start?



[Watch Video Solution](#)



**16.** Write an expression for the centripetal force.



**Watch Video Solution**

**17.** What clastic and inelastic collisions? Give one example of each and state their charatarpath.



**Watch Video Solution**

**18.** The velocity of a car is doubled. Find the ratio of percentage increase in its K.R. to the percentage increase in its momentum.



**Watch Video Solution**

**19.** Define orbital velocity. How is it related with escape velocity?



**Watch Video Solution**

**20.** Determine excess of pressure in side liquid drop



**Watch Video Solution**

**21.** Write the postulates of kinetic theory of gases.



**Watch Video Solution**

**22.** What is an echo?



[Watch Video Solution](#)

**23.** Derive an expression for total energy of a body at any instant.



[Watch Video Solution](#)

**24.** Define wavelength of a wave.



[Watch Video Solution](#)

**25.** Define wave motion. What are its characteristics?



**Watch Video Solution**

**26.** What is a black body?



**Watch Video Solution**

**27.** State and prove Bernoulli's theorem for liquid having streamline flow.



[Watch Video Solution](#)

**28.** Displacement is a



[Watch Video Solution](#)

**29.** Define terminal velocity and find an expression for it.



[Watch Video Solution](#)

**30.** What is the position of centre of mass of a uniform sphere?



**Watch Video Solution**

**31.** Define theorem of perpendicular axes and apply it to find the moment of inertia of a thin uniform circular ring about any diameter.



**Watch Video Solution**

**32.** Upon what factors the centre of mass of a body depends?



**Watch Video Solution**

**33.** How torque is related to angular momentum?



**Watch Video Solution**