



PHYSICS

BOOKS - JBD PUBLICATION

MODEL TEST PAPER-04

Exercise

1. What is the unit of pressure ?



Watch Video Solution

2. Earth is at rest w.r.t. sun.(True / False).



[Watch Video Solution](#)

3. Friction is a self- adjusting force. Is it correct?



[Watch Video Solution](#)

4. Moment of inertia is :

A. scalar

B. vector

C. tensor

D. none of these.

Answer:



Watch Video Solution

5. What is the SI unit of power ?



Watch Video Solution

6. Which types of waves are produced in an organ pipe?



[Watch Video Solution](#)

7. Explain Reflection methods (Radar and Sonar) for measuring distances.



[Watch Video Solution](#)

8. What are the limitations of dimensional analysis?



[Watch Video Solution](#)

9. Fill in the blanks:

Horizontal range is same for angle of projection θ and _____



[Watch Video Solution](#)

10. Explain why:- it is easier to pull a lawn mower than to push it.



Watch Video Solution

11. The kinetic energy of a body decreases by 19% .What is the percentage decrease in momentum?



Watch Video Solution

12. A motorcyclist loops the loop of radius 8 m. From what minimum height must he start in order to roll down and go around the loop?



[Watch Video Solution](#)

13. Assuming the earth to be a sphere of uniform mass density, how much would a body weigh half way down to the centre of the earth if it weighed 250 N on the surface ?



[Watch Video Solution](#)

14. Steel is more elastic than rubber. Explain why?



Watch Video Solution

15. Derive a relation between linear acceleration and angular acceleration.



Watch Video Solution

16. A body is dropped from the top of the tower and reaches the ground in 3s. Then the height of the tower is



Watch Video Solution

17. Newton's second law of motion is not the real law of motion.(Yes//No)



Watch Video Solution

18. A ball of mass 50 g falls from a height of 10 m and rebounds to a height of 5 m. Find the impulse and average force between the ball and ground if both were in contact for 0.1 second.



[Watch Video Solution](#)

19. Show that sum of P.E. and k.E. of a freely falling body is conserved.



[Watch Video Solution](#)

20. Write characteristics of gravitational force.



Watch Video Solution

21. Define critical velocity and find a relation for it. Also discuss the importance of Reynold's number.



Watch Video Solution

22. What is heat?



Watch Video Solution

23. Define seconds pendulum.



Watch Video Solution

24. What is relation between acceleration and displacement of a particle executing S.H.M?



Watch Video Solution

25. Derive Newton's formula for velocity of sound in air. Point out the error and hence discuss Laplace's correction to find out the velocity of sound.



Watch Video Solution

26. Why dust particles take long time to settle down ?



Watch Video Solution

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



Watch Video Solution

28. Define latent heat.



Watch Video Solution

29. State Newton's law of cooling.





[Watch Video Solution](#)

30. What is physical significance of moment of inertia?



[Watch Video Solution](#)

31. Find an expression for the rotational kinetic energy of a body.



[Watch Video Solution](#)

32. Define centre of mass.



Watch Video Solution

33. State Theorem of perpendicular axis.



Watch Video Solution