



PHYSICS

BOOKS - JBD PUBLICATION

Model Test Paper 9

Exercise

1. What do you mean by work done by a force?

What is the work done by a force?

A. Positive

B. negative

C. zero

D. all of these

Answer:



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2. Define a light year.



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3. Displacement is a



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4. Moment of inertia of a body depends only on the mass of body.(True / False).



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5. Fill in the blanks

Moment of inertia is measured in



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6. Explain damped and undamped oscillations.



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7. Find the dimensions of universal gravitational constant.



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8. Define absolute error.



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9. A car crosses a pole with velocity 20ms^{-1} and another pole with velocity 30ms^{-1} , find its velocity in the middle of the two poles.



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10. A bullet of mass 20 g is fired with speed 400ms^{-1} by a gun of mass 8 kg. Find the recoil velocity of the gun.



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11. The force $F = (2 + 4x^2 + 2x^3)$ N acting on a body displaces from zero to 5m. Calculate the total work done by the force .



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12. State and explain the law of conservation of linear momentum. Explain recoil of a gun and explosion of a bomb.



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13. Why we do not feel the force of gravitation in dialy life?



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14. Using time velocity graph, derive the relation $v^2 - u^2 = 2aS$, where every letter has its usual meaning.



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15. Derive an expression for acceleration of a body moving down an inclined plane.



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16. Prove that in an elastic collision the value of co-efficient of restitution is one.



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17. How does value of acceleration due to gravity vary with depth



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18. Determine excess of pressure in side liquid drop



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19. What is heat engine?



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20. Define the molar specific heats fo a gas and find a relation btween them.



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21. Write the unit of angular momentum.



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22. Prove the theorem of parallel axes.



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23. Define torque. Discuss the rotational motion of a single particle in a plane.



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24. State Theorem of perpendicular axis.



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25. What is the S.I. unit of surface tension ?



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26. Define terminal velocity and find an expression for it.



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27. Define coefficient of viscosity. Give its unit.



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



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29. What do you mean by phases of a substance?



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30. What is an ideal simple pendulum? Prove that it oscillates harmonically and find its time period?



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31. Define wavelength of a wave.



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32. What are stationary waves? State their characteristics.



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