PHYSICS

BOOKS - JBD PUBLICATION

Model Test Paper 11

Exercise

1. Define absolute error.

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2. Displacement of a moving body can be zero (yes/no)

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3. Force is measured in ....in S.I.system.

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4. Power multiplied by time gives energy. (true/false)

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5. What is the unit of moment of foce?

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6. On what factors does the internal energy of
an ideal gas depend?

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7. Write the value of Avogadro's number.

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8. Every periodic motion is simple harmonic

motion(tru/False)

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9. Are the dimensions of coefficient of viscosity

and coefficient of friction same?

10. Distinguish between inertial mass and gravitational mass

11. Two vectors $\vec{A}$ and $\vec{B}$ have their resultant equal to either of them, the angle between them is

12. A bullet of mass 40 g hits a mud wall with speed 400 ms^{-1}. The bullet stops after penetrating 50 cm inside the wall. Find the average resistive force exerted by the wall on the bullets.

13. Oif a force 20 N is applied on a body of mass 5 kg at rest then find the kinetic energy of the body after 10s.

14. list the factors on which virulence depends.

15. Prove mathematically that the value of acceleration due to gravity has a constant value at a place.

16. Define scalar product of two vectors and state its characteristics.

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17. Oif a force 20 N is applied on a body of mass 5 kg at rest then find the kinetic energy of the body after 10s.

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18. What is the need of banking a circular road?

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

20. The displacement x of a body of mass 10 kg moving in one dimension under the action of a constant force is related to time by the equation t = $\sqrt{x}$ + 3. Find the work done by the force in first 5 seconds.

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21. Define escape velocty. Obtain an expression for the escape velocity of a body from the surface of earth.

22. Find an expression for the heat which flows from one pont to the other point of a conductor and hence define co-efficient of thermal conductivity of the conductor.

23. What is a refrigerator? Calculate its coeficient of performance.

24. Deduce the expression for work done in an isothermal process.

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25. What is periodic motion ? Give few examples .

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26. Draw a graph to show the variation s of P.E., K.E. and total energy of a simple harmonic oscillator with displacement.

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27. Explain damped and undamped oscillations.

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28. What is simple harmonic motion and prove a simple pendulum oscillates simple harmonically?Also find a relation for its frequency.

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29. Why telephone wires between two poles become taut in winter?

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30. Derive an expression for the rise of liquid in a capillary tube and show that the height of the liquid column supported is inversely proportional to the radius of the tube.

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31. What is plastic? What are its different types?

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

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33. Define centre of mass.

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34. Prove the theorem of parallel axes.

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35. Which law is used by a ballet dancer to change her speed or rotation?

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36. Define moment of inertia

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