SIDDHIKSHA EDUCATION CARE 2024-25
PHYSICS – 11

1. State – Universal law of gravitation.

2. Why do we have seasons on Earth?

3. State Hooke's law.

4. Which is more elastic? Rubber or steel? – Reason.

5. State – Vien's displacement law.

6. Define Poisson's ratio.

7. Why the energy of the satellite negative?

8. State Boyle's law.

9. Calculate the energy of (i) Moon orbiting Earth (ii) Earth orbiting Sun.

10. Let 2.4×10^{-4} J of work is done to increase the area of a film of soap bubble from 50 cm² to 100cm². Calculate the value of surface tension of soap solution.

11. What is geostationary satellite?

12. Distinguish between steamlined flow and turbulent flow.

13. What is meant by 'Thermal equilibrium'?

14. Draw the PV diagram for Isothermal process.

1. State Kepler's three laws.

2. Explain the variation of g with altitude.

3. Explain Young modulus of elasticity.

4. State Pascal's law in fluids.

5. Obtain an ideal gas law from Boyle's and Charle's law.

6. Define specific heat capacity and give its unit.

7. The reading of pressure meter attached with a closed pipe is 5×10^5 Nm^{-2}. On opening the valve of the pipe, the reading of the pressure meter is 4.5×10^5 Nm^{-2}. Calculate the speed of the water flowing in the pipe.

8. There are two carnot engines A and B operating in two different temperature regions. For engine A the temperatures of the two reservoirs are 150^0C and 100^0C. For engine B the temperatures of the reservoirs are 350^0C and 300^0C. Which engine has lesser efficiency?

9. State – Kepler's law of planetary motion.

10. Write the application of viscosity.

11. State and Explain Newton's law of cooling.

12. Two pistons of a hydraulic lift have diameters of 60 cm and 5 cm. What is the force exerted by the larger piston when 50 N is placed on the smaller piston?

13. Lunar eclipse and solar eclipse do not happen every month. Why?

14. What is Reynoids number? What is its significance.

15. What factors affect the surface tension of a liquid?

16. State the Stefan – Boltzmann rule.

17. A solid sphere ha a radius of 1.5 cm and a mass of 0.038 kg. Calculate the relative mass of the solid planet.

1. Derive the expression for Escape speed.

2. State and explain Bernoulli's theorem.

3. Explain Mayer's relation.

4. Explain in detail Newton's law of cooling.

5. Explain the variation of G with depth.

6. Write a note on a) Charle's law. b) Specific heat capacity. c) Linear Expansion