

Physics	9th Class (2022)	Lahore Board
Time: 1:45 Hours	Subjective Type	Marks:48

## (GROUP - I)

## Part - I

- 2 Write short answers to any Four (4) questions: (10)**
- Define prefixes and give two example.
  - Differentiate between rest and motion.
  - Define force and write down its SI units.
  - State the law of conservation of momentum.
  - What is meant by base units and derived units?
  - Write any two differences between mass and weight.
  - Define random motion and write down one example.
  - Write down the SI units of temperature electric current force and electric charge.
- 3 Write short answers to any Four (4) questions: (10)**
- Define Torque and Moment Arm.
  - What is meant by plumb line?
  - What is meant by geostationary orbit?
  - Describe law of gravitation and Newton's third law of motion.
  - How the value of 'g' varies with altitude?
  - Define Work and its SI unit.
  - Define Biomass Energy and Geothermal Energy.
  - What is meant by Power and Watt?
- 4 Write short answers to any Four (4) questions: (10)**
- Why does the atmospheric pressure vary with weight?
  - State Hooks Law.

- Define pressure and write its formula.
- Differentiate between temperature and heat.
- Define latent heat of fusion.
- Conduction of heat does not take place in gases, give reason.
- What is meant by Convection Current?
- Write two uses of good conductors.

## Part - II

**Note: Attempt any TWO questions.**

- 5** (a) Derive the second equation of motion with the help of speed time graph.  
(b) How much the force of friction between a wooden block of mass 5 kg and the horizontal marble floor? The coefficient of friction between wood and the marble is 0.6.
- 6** (a) What is meant by Kinetic Energy? Derive its equation.  
(b) A force is acting on a body making an angle of  $30^\circ$  with the horizontal. The horizontal component of the force is 20 N. Find the force.
- 7** (a) Derive an equation for the pressure at some depth in a liquid  
(b) How much heat is required to increase the temperature of 0.5 kg of water from  $10^\circ\text{C}$  to  $65^\circ\text{C}$ .