

PHYSICS	9th 2022 Gujranwala Board	Paper-I
Time: 1:45 Hrs.	Subjective Type	Marks: 48

### SECTION-I

2. Write short answers to any FIVE (5) questions. (10)

- i) What is meant by derived quantities and derived units?
- ii) Define scientific notation and give two examples.
- iii) Define positive and negative zero error of vernier callipers.
- iv) Differentiate between rotatory motion and vibratory motion.
- v) Differentiate between positive and negative acceleration.
- vi) Define momentum and write down its SI unit.
- vii) Define co-efficient of friction and write down its formula.
- viii) What is meant by banking of the roads?

3. Write short answers to any FIVE (5) questions. (10)

- i) What is second condition for equilibrium? Write down its mathematical equation.
- ii) Define resultant of forces.
- iii) What is meant by centre of mass and centre of gravity?
- iv) Describe the law of gravitation.
- v) What is meant by global positioning system?
- vi) What is the height of a geostationary satellite from the centre of Earth and velocity with respect to Earth?
- vii) What is meant by nuclear fuels?
- viii) What is meant by Solar House Heating?

4. Write short answers to any FIVE (5) questions. (10)

- i) State Pascal law.
- ii) Define hydrometer.
- iii) Why is water not suitable to be used in a barometer?
- iv) Differentiate between temperature and heat.
- v) Define internal energy.
- vi) Why does heat flow from hot body to cold body?
- vii) Differentiate between conduction and convection.
- viii) What is meant by green house effect?

### SECTION-II

Note: Attempt any TWO (2) questions. (18)

5.(a) Define and explain the law of conservation of momentum. (5)

(b) A train starts from rest. It moves through 1km in 100 seconds with uniform acceleration. (4)

6.(a) Calculate the mass of the Earth. (5)

(b) A motor boat moves at a steady speed of  $4\text{ms}^{-1}$ . Water resistance acting on it is 4000N. Calculate the power of its engine. (4)

7.(a) What is meant by evaporation? On what factors does the evaporation of a liquid depend? Explain. (5)

(b) What would be the volume of ice formed by freezing 1 litre of water? (4)