

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 Write down two demerits of measuring instruments, used in the past.
- ii Define Physics.
- iii What role SI units have played in the development of science?

- iv Define scalar and give its two examples.
- v Differentiate between rest and motion.
- vi What is position?
- vii Why rolling friction is less than sliding friction?
- viii State "law of conservation of momentum".

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

- i Why communication satellites are stationed at geostationary orbits?
- ii What is mass of the earth? Write down the formula to find the mass of the earth?
- iii If radius of the earth (R) becomes doubled, then what will be effect on orbital speed?
- iv How biogas is prepared from biomass?
- v A body of mass 50kg is raised to a height of 3m. What is its potential energy? (if $g = 10\text{ms}^{-2}$)
- vi What is difference between rigid body and axis of rotation?
- vii When a body is said to be in equilibrium?
- viii Which form of energy is most preferred and why?

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

- i What is elasticity?
- ii Define Young's modulus also write down its formula.
- iii What is meant by linear thermal expansion?
- iv On which factors evaporation does depend? Write down their names.
- v Define lower and upper fixed points in thermometer.
- vi Distinguish between insulators and conductors.
- vii Define global warming.
- viii How do birds fly?

SECTION-II

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

5.(a) State Newton's second law of motion. Derive an expression of force and hence define SI unit of force. (5)

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

6.(a) State and explain the law of gravitation. (5)

(b) Calculate the power of a pump which can lift 70kg of water through a vertical height of 16m in 10s. Also find the power in horse power. (4)

7.(a) Define specific heat capacity. Describe the importance of large specific heat capacity of water. (5)

(b) A wooden cube of sides 10cm each, has been dipped completely in water. Calculate the upthrust of water acting on it. (4)