

UNSOLVED

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

(GROUP – II)**Part – I**

2 Write short answers to any Four (4) questions: (10)

- i. Differentiate between Geo physics and plasma physics.
- ii. Define acceleration and write down its SI unit.
- iii. State Newton's second law of motion.
- iv. Write the number of significance figures in each case.
(i) 275.00 (ii) 0.027
- v. Define base units. Write down the base units of temperature and electric current.
- vi. Differentiate between circular motion and rotatory motion.
- vii. SI unit of force is Newton. Define one Newton force.
- viii. Differentiate between rest and motion.

3 Write short answers to any Four (4) questions: (10)

- i. Describe like and unlike parallel forces.
- ii. What is meant by rigid body and line of action of force?
- iii. Why are vehicles made heavy at the bottom?
- iv. Why we cannot feel gravitational force around us?
- v. What is meant by gravitational field strength?
- vi. What is the difference between artificial and natural satellite?
- vii. Define work. On what factors work depends.
- viii. Describe Einstein's mass energy equation.

4 Write short answers to any Four (4) questions: (10)

- i. Define principle of floatation.
- ii. Why is water not suitable to be used in a barometer?
- iii. Why does the atmosphere pressure vary with height?
- iv. Write down applications of thermal expansion.
- v. Differentiate between temperature and heat?
- vi. Why does thermal energy flow from hot body to cold body?
- vii. Why conduction of heat does not take place in gases?
- viii. What is greenhouse effect?

Part – II

Note: Attempt any TWO questions.

5 (a) State Newton's first law motion and explain with the help of two examples.

(b) Find the retardation produced when a car moving at a velocity of 30ms^{-1} slows down uniformly to 15ms^{-1} in 5s.

6 (a) Explain the motion of artificial satellites and derive the formula of orbital speed near Earth.

(b) Find the magnitude and direction of force, if its x-component is 12N y-component is 5N.

7 (a) State Pascal's law and explain hydraulic press.

(b) A brass rod is 1m long at 0°C . Find its length at 30°C . (Coefficient of linear expansion of brass is $1.9 \times 10^{-5} \text{K}^{-1}$).