

Physics	Lahore Board Ninth, 2021	Paper – I
Time: 1.45 Min.	Subjective Type	Marks : 48

(Group – I)

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

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- Define base units and derived units
- Define positive and negative zero error of vernier callipers.
- Define prefixes and give two examples.
- Define velocity and write its formula.
- Convert 50 Km h^{-1} to ms^{-1}
- Define rest and motion.
- Why rolling friction is smaller than the sliding friction?
- Define centripetal acceleration and write its formula.

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

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- Differentiate between like and unlike parallel forces.
- Define torque and write its mathematical equation.
- What do you mean by centre of gravity?
- What do you know about "G"? What is its value?
- Define artificial satellite.
- Define orbital velocity and write its formula.

- Define power and write its formula.
- What is meant by the efficiency of a system?

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

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- Why strain has no unit? give reason.
- Define elastic limit.
- Write down the formula of pressure and strain.
- Define latent heat of fusion.
- What is meant by internal energy?
- What is the effect of temperature on evaporation?
- How does heat reach us from sun?
- Why does land breeze blow in the night?

PART – II

Note: Attempt any Two questions.

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

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(b) A train starts from rest with an acceleration of 0.5 ms^{-2} . Find its speed in km h^{-1} when it has moved through 100 m?

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6. Define potential energy, give an example and derive its equation.

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

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

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(b) Calculate the increase in the length of an aluminium bar 2m long when heated from 0°C to 20°C . The thermal coefficient of linear expansion of aluminium is $2.5 \times 10^{-5} \text{ K}^{-1}$.

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