

PART - I**Q.2** Write short answers to any Five (5) questions: 10

- i Differentiate between base quantities and derived quantities.
- ii Define plasma physics.
- iii Write down two rules to identify the significant figures.
- iv Differentiate between vectors and scalars.
- v Define position.
- vi Write down mathematical form of 3rd equation of motion.
- vii Write down two disadvantages of friction.
- viii Differentiate between centripetal and centrifugal force.

Q.3 Write short answers to any Five (5) questions: 10

- i What is a solar cell? Write down its uses.
- ii Why an energy saver lamp is better than an electric lamp?
- iii Define power. Write down its SI unit.
- iv Define force of gravitation.
- v What is meant by artificial satellites? Write down their

uses.

- vi Why does the value of 'g' vary from place to place?
- vii Write difference between like and unlike parallel forces.
- viii Define centre of mass.

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

- i What is meant by elastic limit?
- ii Define density and write its unit.
- iii Write four differences between solid and gas state of matter.
- iv What is meant by internal energy of a body?
- v Define specific heat capacity.
- vi What is meant by transfer of heat? Write its modes.
- vii Upon which factors radiation depend?
- viii Why does land breeze blow in the night?

PART - II**Note:** Attempt any TWO questions.**Q.5(a)** Derive the second equation of motion with the help of speed-time graph. 1,3**(b)** How much centripetal force is needed to make a body of mass 0.5 kg to move in a circle of radius 50 cm with a speed 3 ms^{-1} ? 5**Q.6(a)** Explain any two states of equilibrium. 4**(b)** Calculate the value of 'g' at a height of 3600 km above the surface of the earth. 5**Q.7(a)** Define and explain latent heat of fusion. 4**(b)** A student presses her pain by her thumb with a force of 75 N. What would be the pressure under the thumb having contact area 1.5 cm^2 ?