

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

- i Define least count, what is the least count of meter rod?
- ii Express 3200000W in kilo and megawatt by using prefixes.
- iii Write two characteristics of physical quantities.
- iv What is meant by banking of road?
- v What is braking and skidding?
- vi How can you relate a force with the change of momentum of a body?
- vii What is the value of radius of earth?
- viii What is a resultant force?

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

- i Define rotatory motion with an example.
- ii Differentiate scalars and vectors with examples.
- iii What is kinematics?
- iv State Archimedes Principle.
- v Define Young's Modulus and write its SI unit.
- vi Can we use a hydrometer to measure the density of milk?
- vii Define thermal conductivity.
- viii How does heat reach us from the sun?

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

- i How head to tail rule helps to find resultant of forces?
- ii What is second condition for equilibrium?
- iii Define centre of gravity.
- iv Why ideal system does not exist in our daily life?
- v Why are fossil fuels called non-renewable form of energy?
- vi Define kinetic energy and potential energy.
- vii What is clinical thermometer? Write its range.
- viii Convert 50°C on a Celsius scale into Fahrenheit temperature scale.

PART-II**Note:** Attempt any TWO questions.

- Q.5(a)** Derive a relation between force and momentum. 4
- (b)** The acceleration due to gravity on the moon is 1.62 ms^{-2} . The radius of moon is 1740 km. Find the mass of moon. 5
- Q.6(a)** Define Pascal's law and write a note on hydraulic press. 4
- (b)** A train moves with a uniform velocity of 36 km h^{-1} for 10 s. Find the distance travelled by it. 5
- Q.7(a)** Define equilibrium. Explain first condition for equilibrium. 4
- (b)** Calculate the power of a pump which can lift 200 kg of water through a height of 6 m in 10 sec. 5