Chapter-2

MOTION

Sub-Topic Name:

Rest and motion, Different types of motion, Speed , Mass and weight

1 Mark Questions

1.Multiple Choice Question (MCQS)

(a) A book lying on a table is an example of

1. a body at rest
2. a body in motion
3. a body neither at rest nor in motion
4. none of these

(b) The motion of a pendulum is

1. rotatory
2. oscillatory
3. curvilinear
4. rectilinear

(c) A car moving on a straight road is an example of

1. rotatory motion
2. rectilinear motion
3. oscillatory motion
4. periodic motion

(d) A ball falls down vertically. Its motion is

1. periodic
2. linear
3. circular
4. vibratory

(e) If a body covers equal distance in equal interval of time, the motion is said to be

1. uniform
2. non-uniform
3. oscillatory
4. rotatory

2.. Fill in the blanks

a) 36 km h-1 = …….. m s^{-1}

b) Total distance travelled = ……….. × total time taken.

c) The weight of a girl is 36 kgf. Her mass will be …… kg.

d) The weight of a body is measured using a spring balance.

Short Answer Type Questions

I.   Explain the meaning of the terms rest and motion.

II.   Comment on the statement 'rest and motion are relative terms'.

III. What do you mean by translatory motion ? Give one example.

IV.   Explain the meanings of (i) rectilinear motion, and (ii) curvilinear motion. Give one example of each

V.   Find out the relation between m/s and km/h ?

VI.   What is average speed ?

VII. Define the term weight and state its S.I. unit.

VIII. How are the units of weight, kgf and newton related ?

IX.   A car travels a distance of 15 km in 20 minute. Find the speed of the car in (i) km/h (ii)m/s

X.   How long a train will take to travel a distance of 200 km with a speed of 60 km/h?

Long Answer Type Questions

I.   How does a rotatory motion differ from the circular motion?

II.   Differentiate between periodic and non-periodic motions by giving an example of each.

III. Distinguish between uniform and non-uniform motions, giving an example of each.

IV.   How do you determine the average speed of a body In a non-uniform

motion ?

V. State three differences between mass and weight.

VI. A car travels with speed 30 km/hour for 30 minutes then with speed 40 km /h for 1 h Find : (a) the total distance travelled by the car (b) the total time of travel, and (c) the average speed of car

VII. On earth the weight of mass 1.0 kg is 10 N. What will be the weight of a boy of mass 37 kg in (a) kgf (b) N ?

VIII. The weight of a body of mass 6.0 kg on moon is 10 N. If a boy of mass 30 kg goes from earth to the moon surface, what will be his (a) mass, (b) weight.