Board – ICSE	Class – 7th	Topic – MOTION

1. Give reasons for the following
    1. Rotation of the earth is a periodic motion.
    2. A boy riding on a moving bicycle has a multiple motion.
2. Match the following.

Physical Quantity	SI Unit
1. displacement	(a) second
2. velocity	(b) metre per second square
3. time	(c) metre per second
4. acceleration	(d) metre

3. Differentiate between the following.
    1. Rectilinear motion and curvilinear motion
    2. Vibratory motion and periodic motion
    3. Scalar quantity and vector quantity
    4. Distance and displacement
    5. Speed and velocity
4. Define the following terms and also give one example of each.
    1. Random motion
    2. Multiple motion
    3. Second's pendulum
5. Answer these questions.
    1. What is oscillatory motion? Give two examples.
    2. What is translatory motion? Name two kinds of translatory motion.
    3. Give an example to show that rest and motion are relative terms.
    4. What is a simple pendulum? What are the factors affecting the time period of a simple pendulum?
    5. Classify the following into translatory, rotatory and oscillatory motions.

        (a) ball thrown by a child (b) giant wheel

(c) piston of a car (d) swinging pendulum
(e) freely falling stone (f) spinning top
(g) charkha (h) throwing of a javelin
(i) potter's wheel

6. By giving at least two examples each, define the following terms.
   (a) Rectilinear motion (b) Curvilinear motion
   (c) Rotatory motion (d) Oscillatory motion
   (e) Vibratory motion (f) Periodic motion
7. Define : (i) rest, (ii) motion.
8. Define : (a) speed, (b) velocity. Bring out clearly the difference between speed and velocity.
9. (a) Define : (i) acceleration, (ii) acceleration due to gravity
10. What do you understand by the terms (a) uniform velocity, (b) variable velocity? Give one example of each.
11. Define the following with reference to simple pendulum:
    (a) pendulum (b) mean position (c) oscillation (d) time period (e) amplitude
12. Practice for numerical problems.

a) Calculate the speed of a car moving a distance of 150 km in 3 hours.
b) Calculate the time taken by a train moving at a speed of 50 km/h if it covers 250 kilometres.
c) Calculate the distance travelled by a bicycle moving at a speed of 20 km/h in 2 hours.
d) A car starting from rest, picks up a velocity of 15 m/s in 20 seconds. Find the acceleration of the car.
e) A car is travelling at 15 m/s. If its velocity increases to 20 m/s in 5 s then find the acceleration of the car.