

## Chapter 2: Motion

### Worksheet 1

#### 1. Fill in the blanks.

- (i) An object is said to be in a state of \_\_\_\_\_ if its position changes with time with respect to its surroundings.
- (ii) The flowing water in a river is also in a state of \_\_\_\_\_.
- (iii) Motion of the earth around the sun is a kind of \_\_\_\_\_ motion.
- (iv) The combination of rotatory and translatory motions is called \_\_\_\_\_ motion.
- (v) The actual length of a path covered by a moving object is called the \_\_\_\_\_ travelled by it.

#### 2. Write the type of motion in following cases.

- (i) A boy running on a straight road
- (ii) Vibrating string of a guitar
- (iii) Movement of a swing
- (iv) A merry-go-round
- (v) Motion of a stone tied to a string

#### 3. Define the following.

- (i) Weight
- (ii) Distance
- (iii) Speed
- (iv) Translatory motion
- (v) Periodic motion

#### 4. Answer the following questions.

- (i) Define rest.
- (ii) Name the motion which does not repeat itself at regular intervals of time.
- (iii) What is the ratio of total distance travelled and total time taken for motion?
- (iv) Is mass a scalar quantity?
- (v) How is weight measured?

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### Worksheet 2

#### 1. True or False statements.

- (i) If the motion of an object is along a straight path, it is said to be in rectilinear motion.
- (ii) A roulette wheel is an example of rotatory motion.
- (iii) The SI unit of speed is km/h.
- (iv) Weight of an object on the moon's surface is only  $\frac{1}{6}$  th of its weight on the earth's surface.
- (v) Weight is a scalar quantity.

#### 2. Match the columns.

##### Column A

- (i) Rectilinear motion
- (ii) Curvilinear motion
- (iii) Circular motion
- (iv) Oscillatory motion
- (v) Vibratory motion

##### Column B

- (a) Motion of the moon around the earth
- (b) Motion of string of Veena
- (c) Motion of a swing
- (d) A freely falling stone
- (e) A bullet fired from a gun

#### 3. Answer the following questions.

- (i) Why are rest and motion relative terms?
- (ii) What is meant by random motion? Give its two examples.
- (iii) Define average speed.
- (iv) How is speed calculated?
- (v) What is meant by uniform motion?

#### 4. Solve the following numerical problems.

- (i) A bus is running at a uniform speed of 80 km/h. Find its speed in m/s.
- (ii) Find the time taken by a 500-m long train to cross a 2000-m long bridge at a speed of 20 km/h.