

SCIENCE CLASS TEST

MOTION AND ITS TYPES

DATE: 21.08.26

FULL MARKS: 10

• **Choose the correct option: (4×1=4)**

1. **Assertion (A):** The blades of a rotating ceiling fan show rotational motion.

Reason (R): Every point on the blade moves around the fixed axis of the fan.

- A. Both A and R are true, and R is the correct explanation of A.
- B. Both A and R are true, but R is not the correct explanation of A.
- C. A is true, but R is false.
- D. A is false, but R is true.

2. Which statement correctly explains why circular motion and rotational motion should not always be treated as the same?

- A. Circular motion is always periodic, but rotational motion is never periodic.
- B. Circular motion occurs only in wheels, while rotational motion occurs only in fans.
- C. Circular motion occurs only in moving objects only when it moves to and fro, while rotational motion occurs only in stationary objects moves on its fixed axis.
- D. Circular motion concerns the path followed by an object or point, while rotational motion concerns an object turning about an axis.

3. Which of the following will show both linear and rotational motion?

- A. A ball moving down the inclined plane
- B. Spin ball thrown by the bowler in a cricket match
- C. A ball spinning on finger
- D. A car moving in a circular track

4. Match the events related to motion in column I with the types of motions given in column II.

Column I	Column II
a. Movement of the tip of the minute hand of a clock in 1 hour	i. Circular motion
b. The Earth revolving around Sun	ii. Oscillatory motion

c. A moving swing	iii.Periodic motion
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A. a-iii, b-ii, c-i
 B. a-i, b-ii, c-iii
 C. a-iii, b-i, c-ii
 D. a-i, b-iii, c-ii

• **Subjective questions: (6Marks)**

5. A motion repeats itself, but not at regular intervals. Can it be called periodic motion?
6. Barun was riding his bicycle along a straight road. He classified the motion of various parts of the bicycle as (1+1)
 - i. Circular motion
 - ii. Rotational motion

List one part of the bicycle for each type of the motion.

7. A boy walks from point A to point B in 10 minutes at a constant speed. He then returns from point B to point A in another 10 minutes, also at a constant speed. He follows the same route once in the morning and once in the evening every day for a week. (1+2)

A ————— → B

 Boy walking

A ← ————— B

 Boy returning

- A. What type of motion does the boy show while travelling from A to B and from B to A?
- B. The boy repeats the same journey twice every day at regular times. Can this activity be considered periodic motion? Give a reason.