



Class - VI November Month Class Work Notes

11. Measurement and Motions

Technical Words:

1. Physical quantity - any quantity that can be measured
2. Standard unit - a standard measure that remains the same whenever, wherever and by whomever it is used
3. Motion - the change of position of a body over a period of time, with respect to a stationary body
4. Translatory motion - a type of motion in which every part of a moving object covers the same distance in a given period of time.
5. Rectilinear motion - a type of translatory motion where the motion is in a straight line.
6. Curvilinear motion - a type of translatory motion where the motion is along a curved line.
7. Rotational motion - a type of motion in which an object moves around a fixed point and different parts of the object cover different distances over the same interval of time

A. Short answer question.

1. Name the SI units for length, mass and time.

[Answer] SI units for length, mass, and time are metre, kilogram, and second, respectively.

2. Name three different instruments that can be used to measure length.

[Answer] Three different instruments that can be used to measure length are ruler, vernier caliper and measuring tape.

3. Define periodic motion.

[Answer] Periodic motion is the type of motion that repeats itself after a fixed interval of time.

4. What are the two types of translatory motion?

[Answer] The two types of translatory motion are rectilinear motion and curvilinear motion.

5. Give an example of multiple motion.

[Answer] An example of multiple motion is a bicycle moving forward (translatory/rectilinear), while its wheels rotate (rotational).

B. Long answer question.

1. Explain the importance of having a standard system of units.

[Answer] The standard system of units is important because it provides a consistent and universally understood way of measuring physical quantities, enabling accurate communication and comparison of measurements across different contexts and locations.

2. Describe the different kinds of errors that may occur while using a ruler. Also, explain how to avoid these errors.

[Answer] Errors that may occur while using a ruler include parallax error, incorrect positioning of the ruler, or using a worn-out ruler. To avoid these errors, the ruler should be placed directly over the object, the eye should be aligned with the reading mark, and any worn-out part should be compensated for during measurement.

3. Describe two different ways to measure the length of a mobile charging cord without using a pair of dividers.

[Answer] Two different ways to measure the length of a mobile charging cord without using a pair of dividers are:

(i) Mark the segments on the cord and use a ruler to measure each segment to calculate the length of the cord. OR wrap the cord around a cylindrical object, like a pen, without overlapping. Measure the length along the object.

(ii) Use a piece of thread to match the length of the cord, then measure the thread's length against a ruler.

4. Write down the differences between rectilinear and curvilinear motions with diagrams and examples.

[Answer] Rectilinear motion involves motion along a straight line, such as a car moving on a straight road. Curvilinear motion involves motion along a curved path, like a car turning a corner. (Diagrams: Refer to the textbook)

5. Using labelled diagrams, explain the difference between the motion of a carousel and the motion of a pendulum.

[Answer] The motion of a carousel involves circular motion, where the object follows a circular path around a fixed point. The motion of a pendulum is oscillatory motion, where the object moves to and fro around a fixed point. (Diagrams: Refer to textbook.)

C.

Image-based question.

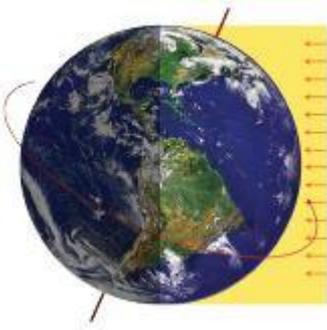
Identify the types of motion.

1.



[Answer] Rotational

2.



[Answer] Rotational

3.



[Answer] Oscillatory

1.Assertion - The objects which are move along a straight line are called rectilinear motion.

Reason - The objects which are move in a circular form are called circular motion of that object.

Ans: Option B

2.Assertion - For measuring the length of an object choose a suitable device.

Reason - We can measure the length of a curved line directly by using a meter scale.

Ans: Option c