KALPAVRUKSHA MODEL SCHOOL

ANSWERS OF ASSIGNMENT

Class: VII **Sub: Physics** **Date: 27.5.2021**

Topic: TIME AND MOTION

I. Answer the following questions:

1. **Define SI unit**.

Ans: The international system of units with an improved form of metric system is called S I units which does not vary from place to place and person to person.

2. **Name two units of time other than the SI unit**.

Ans: Minute and hour are the two units of time other than SI units.

3. **Name the different types of clocks used in early (ancient) times**.

Ans: Sundials, hourglass, water clock, candle clock and pendulum are few types of clocks used in early times.

4. **Why do we need to measure time?**

Ans: We need to measure time for a variety of applications like:

a) if we want to wait for someone or watch something
b) to sleep, to wake up in time, to know whether its night or day
c) to know what time a computer takes to perform an operation etc.

5. **Write short notes on different types of clocks used from ancient times to the present**.

Ans: Sundial, hourglass, pendulum clock, atomic clock, water clock, are some of clocks which have been used from ancient times to the present day.

In **sundial** the movement of shadow of a rod struck upright in the ground, whose shadow changes direction with the movement of the sun across the sky.

Hourglass consisted of two rounded glass bulbs connected by a narrow neck of glass, the bulb was filled with sand and a measured amount of sand particles streamed from the top bulb into the bottom bulb, giving the time.

Water clock is an instrument which works on the principle of regulated flow of water.

The Pendulum clock was invented by Christian Huygens in 1656. It consisted of weights and swinging pendulum, dial, minute and hour hand, pediment, body, chain, plinth. It is a harmonic oscillator. It swings back and forth in a precise time interval, depending on its length.

Atomic clock is a special type of clock. It is used to control the sequence of an event. It is very accurate, so it is used in appliances such as traffic signals, washing machines, highly explosive time bombs, timers in ovens, and stopwatches in various athletic events.

6. Explain how in ancient times, a day, a month and a year was measured.

Ans: Our ancestors noticed that many events in nature repeat themselves after definite intervals of time. The time between one sunrise and the next was called a day. Similarly, a month was measured from one new moon to the next. A year was fixed as the time taken by the earth to complete one revolution of the sun.

7. What is linear motion?

Ans: Motion along a straight line is called linear motion.

8. What is circular motion?

Ans: Motion along a circular motion path or taking rounds is called circular motion.