



# KALPAVRUKSHA MODEL SCHOOL

## Answers of Assignments-3

Class: VIII

Sub: Physics

Date: 5.06.2021

Topic: STARS AND SOLAR SYSTEM

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### **I Answers:**

**1. Name any two constellations.**

**ANS:** Great Bear ( Ursa Major), Cassiopeia.

**2. Explain why the celestial bodies appear to move from east to west across the sky when viewed from the earth?**

**ANS:** The celestial bodies appear to move in the sky from east to west direction, this apparent motion of the stars in the sky due to the rotation of the earth from west to east on its axis. When the earth moves or rotates on its axis from west to east then the stars in the sky appear to move in the opposite direction that is from east to west.

**3. Name a constellation which can be seen (a) during summer (b) during winter.**

**ANS:** (a) During summer –Ursa major

(b) During winter.- Cassiopeia.

**4. Write a short note about four constellations.**

**ANS:** The Ursa Major is called 'Great Bear' because its stars are arranged in such a way that they seem to form the outline of the body of a Great Bear (or Big Bear) The Ursa Major is also called Big Dipper because it resembles a dipper (a bowl with a handle), which was used to drink water in olden days. Ursa Minor (Latin: "Lesser Bear", contrasting with Ursa Major), also known as the Little Bear, is a constellation in the Northern Sky. Like the Great Bear, the tail of the Little Bear may also be seen as the handle of a ladle, hence the North American name, Little Dipper: seven stars with four in its bowl like its partner the Big Dipper

- Orion is another well-known constellation that can be seen during winter in the late evenings. It is one of the most magnificent constellations in the sky. It also has seven or eight bright stars. Orion is also called the Hunter. The three middle stars represent the belt of the hunter. The four bright stars appear to be arranged in the form of a quadrilateral.

- The star Sirius, which is the brightest star in the sky, is located close to Orion. To locate Sirius, imagine a straight line passing through the three middle stars of Orion. Look along this line towards the east. This line will lead you to a very bright star.
- Cassiopeia Constellation - The 5 main stars of Cassiopeia constellation are arranged to form the shape of distorted letter W or M. The Cassiopeia constellation is thought to represent an ancient Queen named Cassiopeia seated on a chair. It is visible during winter in the early part of the night.

**5. How can we locate the pole star using the constellation Ursa Major?**

**ANS:** Now look at the two pointer stars at the Ursa Major constellation. Imagine a straight line drawn through the two pointer stars of the Ursa Major constellation. Extend this imaginary line towards the north direction in the sky. This line will lead to a star which is not very bright. This star is the Pole star.

**6. Name the brightest star in the sky which is located close to Orion.**

**ANS:** Sirius is the brightest star in the sky which is located close to Orion

**7. What is responsible for the change of seasons on Earth?**

**ANS:** An important consequence of the motion of tilted Earth around the Sun is that it causes different seasons on the Earth such as summer, autumn, winter and spring.

**8. On what days during a month can you see more stars in the sky? Give reasons.**

**ANS:** Number of stars is same throughout a month in the sky irrespective of days. However, more stars can be seen on a good weather new moon night when there is no moon light to fade away the stars. New moon normally occurs once in a month.