INDIAN SCHOOL AL WADI AL KABIR		
Class: VI	**DEPARTMENT: SCIENCE 2025-26**	**DATE: 10/01/2026**
WORKSHEET NO: 9 WITH ANSWERS	**TOPIC: BEYOND EARTH**	**NOTE: A4 FILE FORMAT**
NAME OF THE STUDENT:	**CLASS & SEC:**	**ROLL NO.**

I. OBJECTIVE-TYPE QUESTIONS

1. Which celestial object appears to remain almost fixed in the night sky and helps in finding direction?
a) Moon
b) Sun
c) Pole star
d) Comet

2. Name the brightest star in the Canis Major Constellation.
a) Aldebaran
b) Sirius
c) Betelguese
d) None of these

3. Among the following, which astronomical body has a visible tail?
a) Asteroids
b) Comets
c) Satellite
d) Moon

4. Which of the following is not a constellation?
a) Orion
b) Taurus
c) Saptarishi
d) Sirius

5. Which planet among the following is a rocky planet rather than a gas giant?

a) Jupiter
b) Saturn

c) Earth
d) Uranus

6. The asteroid belt is found between which two planets in the solar system?
a) Mercury and Venus.
b) Saturn and Neptune.
c) Venus and Earth.
d) Mars and Jupiter.

7. Why do stars appear to move from east to west in the sky?
(a) Stars rotate around Earth.
(b) Earth revolves around the Sun.
(c) Earth rotates from west to east.
(d) Stars change their position daily.

For the following questions, two statements are given- one labelled Assertion (A) and the other labelled Reason (R). Select the correct answer to these questions from the codes (i), (ii), (iii), and (iv) as given below.
i) Both A and R are true, and R is the correct explanation of the assertion.
ii) Both A and R are true, but R is not the correct explanation of the assertion.
iii) A is true but R is false.
iv) A is false but R is true

8. Assertion (A): Comets have a tail when they are close to the Sun.
Reason (R): Heat from the Sun causes gases and dust to glow and form a tail.

9. Assertion (A): Constellations are patterns of stars in a certain region of the sky.
Reason (R): Constellations are made by real physical lines present in space.

10. Assertion (A): Venus is the hottest planet of the solar system.
Reason (R): Venus has a thick atmosphere rich in carbon dioxide that traps heat.

II. SHORT ANSWER TYPE QUESTIONS (2M):

1. What is the pole star?

[Hint: The Pole Star is found directly above the North Pole, which is why it does not seem to move when the Earth rotates. It can be found in the north direction from the entire northern hemisphere.]

2. Name the natural satellite of Earth. In nearly how many days does the Earth's satellite orbit the Earth?

[Hint: Moon is the natural satellite of the earth. The Moon revolves around the Earth in nearly 27 days.]

3. Which planet is called the Red planet and why?

[Hint: Mars is known as the Red Planet because the soil on Mars appears to be red in colour due to the presence of iron oxide or rust particles in it.]

4. During a space observation, a planet shows bright clouds and fast winds but no solid surface. Which type of planet is it?

[Hint: It is a gas giant like Jupiter, Saturn, Uranus, or Neptune because it has no solid surface and is mostly made of gas. Outer planets are mostly made of gases.]

5. The surface of the Moon has many craters. Give a reason why these craters are formed.

[Hint: Craters on the Moon are formed due to the impact of meteoroids, asteroids, and comets colliding with its surface. The Moon has no atmosphere to burn these objects, so they hit the surface directly, creating craters.]

6. Define

(a)Universe.

(b)Milky Way

[Hint:(a) The Universe is a large space consisting of celestial bodies like the stars, planets, galaxy, dust and gases.

(b) The Milky Way is a galaxy. It is made of billions of stars and planets. We live in Milky Way galaxy. Our solar system is a part of it.]

III. SHORT ANSWER TYPE QUESTIONS: (3M)

1. What is an astronomical unit?

[Hint: The average distance between earth and sun is known as astronomical unit. The average distance between the Earth and the Sun is approximately 150 million kilometres. This unit is used to measure distances within our solar system.]

2. Define Light Pollution.

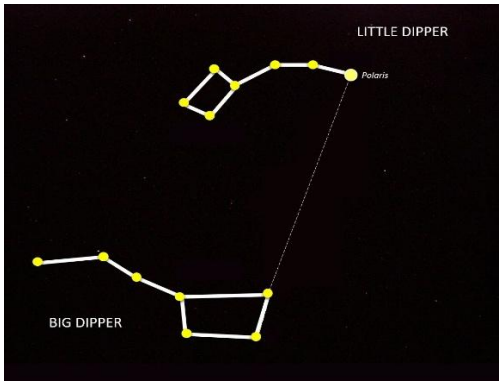
[Hint: The presence of excessive artificial light at night is referred to as light pollution.]

3. Why is the Earth called a unique planet?

[Hint: The Earth is a unique solar system planet because:

(a) Conditions favourable for supporting life are only to be found on Earth.
(b) The Earth is neither too hot nor too cold.
(c) There are air and water in it, which are very important for our survival.]

4. Sketch Big Dipper and Little Dipper neatly.



5. How does the Sun contribute to sustaining life on Earth?
[Hint: The Sun contributes to sustaining life on Earth by providing essential heat and light. This energy helps maintain a temperature suitable for life, supports plant growth, which produces food and oxygen and drives the climate, seasons, weather, water cycle and winds.]

IV. LONG ANSWER TYPE QUESTIONS. (5M)

1. Explain the characteristics of asteroids, including their size range, location in the Solar System and differences to other celestial objects.

[Hint: Characteristics: Asteroids are small, rocky objects that vary in size from about 10 m to 500 km in diameter. Unlike planets, asteroids are irregularly shaped and do not have atmospheres.
Location: Most asteroids are found in the asteroid belt, which lies between the orbits of Mars and Jupiter. This region contains a large number of these small objects, orbiting the Sun.
Comparison: Asteroids are much smaller than planets and lack the spherical shape of planets. They are distinct from comets, which are composed of ice, dust and gases, and have a characteristic tail when near the Sun.]

V. SOURCE-BASED/ CASE STUDY-BASED QUESTIONS

Read the given passage and answer the following questions.

1. A planet is a spherical body that revolves around the Sun. The Earth takes nearly One year to complete one revolution. The inner four planets nearest to the Sun—Mercury, Venus, Earth and Mars—are smaller in size. Mercury is the nearest planet to the Sun. They have solid surfaces with rocks on them. Venus is commonly called the Morning Star or the Evening Star, even though it is not a star. Mars is called the red planet, and Earth is blue planet, because a large portion of the Earth's surface is covered with water and thus, it appears blue from space. The presence of an atmosphere on a planet can trap heat which can significantly change the temperature of a planet. That is why Venus, for example, is hotter than Mercury, although it is farther from the Sun. The outer planets- Jupiter, Saturn,

Uranus and Neptune—are much larger compared to the Earth, and are mostly made of gases. These giant gaseous planets have large, flat ring-like structures around them, which are made
of dust particles and rocky material.

a) Why is the Earth called a blue planet? **[Hint: The outer space, the Earth appears blue because its three- fourths surface is covered by water. It is, therefore, called a blue planet.]**

b) How many planets in the solar system are made of gas? Name them. **[Hint: Jupiter, Saturn, Uranus, and Neptune are made out of gas and they are also referred to as gas giants.]**

c) Which planet is the hottest in our solar system? Why? **[Hint: Venus is the hottest planet in our Solar System. The presence of an atmosphere on a planet can trap heat which can significantly change the temperature of a planet. That is why Venus is hotter than Mercury, although it is farther from the Sun.]**

MCQ Answers

1-c, 2-b,3-b,4-d,5-c,6-d,7-c,8-i,9-iii,10-i.

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