



English

Class: 12th

Subject: English

Lesson 1: THE DYING SUN

Writer: Sir James Jeans

❖ **Exercise Short Questions:**

1. How is it that a star seldom finds another star near it?

Ans: Because the universe is extremely vast and stars are separated by very great distances, it is very rare for one star to come near another.

2. What happened when, according to Sir James Jeans, a wandering star came near the sun?

Ans: The wandering star raised huge tides on the surface of the sun due to its strong gravitational pull.

3. What happened when the wandering star came nearer and nearer?

Ans: The tidal waves on the sun rose higher and finally a great mass was torn away and thrown into space.

4. What are planets and how did they come into existence?

Ans: Planets are pieces torn off from the sun. They were formed when a wandering star passed near the sun and pulled away parts of it.

5. Why is there no life on the stars?

Ans: Because stars are extremely hot and their temperature is far too high for life to exist.

6. Write a note on the beginning of life on the earth.

Ans: Life began on earth after it cooled down. It started in simple organisms which could reproduce themselves, and gradually developed into complex life forms.

7. Why is the universe, of which our earth is a part, so frightening? Give reasons.

Ans: The universe is frightening because of its vast distances, immense time spans, extreme cold and heat, human loneliness, and the smallness of the earth. Also, no sign of life exists elsewhere.

8. What conditions are necessary for life to exist on other heavenly bodies? Do such conditions generally exist?

Ans: Life needs suitable temperature, especially where liquids can exist. Such conditions are very rare and exist only in a narrow belt around stars, so they generally do not exist.

❖ Important Short Questions:

Q1. Why is there no life on stars?

Ans:

Life can exist only where the temperature is neither too hot nor too cold. Stars are huge masses of fire and their temperature is extremely high. Such intense heat makes life impossible on stars.

Q2. What is the Milky Way?

Ans:

The Milky Way is a galaxy to which our sun belongs. It appears as a shining band in the sky on a clear night. It consists of millions and billions of stars and nebulae. Modern astronomy tells us that there are millions of such galaxies in the universe.

Q3. What are planets and how did they come into being?

Ans:

Planets are heavenly bodies which do not shine by their own light but reflect the light of stars. According to The Dying Sun, planets were formed when a wandering star passed near the sun. Its tidal pull raised gigantic waves on the

sun's surface, and pieces of the sun were torn off. These pieces cooled down and became planets, including the earth.

Q4. What happened when a wandering star came nearer and nearer to the sun?

Ans:

As the wandering star came nearer, its tidal pull raised higher and higher tides on the surface of the sun. At last, the tidal wave rose like a huge mountain and was torn into pieces, which were thrown into space.

Q5. What are the necessary conditions for the existence of life on heavenly bodies?

Ans:

Life can exist only where the temperature is suitable—neither too hot nor too cold. On stars, the temperature is extremely high, while in space it is extremely cold. Therefore, life is possible only in narrow temperature belts around stars.

Q6. Why is the universe so frightening?

Ans:

The universe is frightening because of its vast distances, immense stretches of time, extreme loneliness, and the smallness of the earth. Moreover, there is no clear sign of life anywhere except on our planet.

Q7. How did life come into being on the earth?

Ans:

In the beginning, the earth was very hot. As it gradually cooled down, life appeared on it. No one knows how or why this happened. Life began in the form of simple organisms which could reproduce themselves, and gradually developed into complex forms.

Q8. Where is life possible in space?

Ans:

Life is possible only in narrow temperature belts around stars where the temperature is neither too hot nor too cold. Outside these belts life would be frozen, and inside them it would be burnt.

Q9. How big are the stars and how do they travel?

Ans:

Most stars are so large that millions of earths could fit inside them. They travel through space in complete loneliness, as the distances between stars are extremely vast.

Q10. What is the purpose of the essay "The Dying Sun"?

Ans:

The purpose of the essay is to explain Sir James Jeans' theory about the origin of our solar system and to show how rare and precious life is in the vast universe.

Q11. Describe the rare event that took place two thousand million years ago.

Ans:

About two thousand million years ago, a wandering star came near the sun. Its immense tidal pull raised huge tides on the sun's surface and tore off pieces of it. These pieces later became planets.

Q12. What is meant by the life belt or life zone in the universe?

Ans:

The life belt is a narrow region around a star where the temperature is suitable for life. Life cannot exist outside this belt due to extreme heat or extreme cold.

Q13. Why does a star seldom find another star near it?

Ans:

The universe is extremely vast and the distances between stars are very great. Therefore, it is very rare for one star to come near another.

Q14. How did our solar system come into existence according to Sir James Jeans?

Ans:

According to Sir James Jeans, the solar system was formed when a wandering star passed near the sun and tore away parts of it. These parts cooled down and began to revolve around the sun as planets.

Note:

This chapter is designed to provide a solid foundation of knowledge, with the goal of deepening understanding and encouraging further exploration of the subject.

The content has been carefully selected to support effective learning and inspire students to engage with the topic more deeply.

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Purpose: To contribute to education by offering insightful, valuable content that enhances learning and understanding.

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