

Cosmic Power Sources

Renewable Energy · Practice Test · 18 Questions

1. What is the primary source of solar energy that reaches Earth from space?

- A) The Moon
- B) The Sun
- C) Jupiter
- D) Mars

2. Which form of renewable energy is generated by the gravitational pull of the Moon and the Sun on Earth's oceans?

- A) Tidal energy
- B) Wind energy
- C) Geothermal energy
- D) Biomass

3. What type of star is our Sun, which provides the constant light used in solar panels?

- A) Red giant
- B) White dwarf
- C) G-type main-sequence star
- D) Neutron star

4. In space, what do satellites typically use to convert sunlight directly into electricity?

- A) Steam turbines
- B) Photovoltaic cells
- C) Coal burners
- D) Nuclear reactors

5. The kinetic energy of wind on Earth is largely driven by temperature differences caused by what celestial body?

- A) The Sun
- B) Saturn
- C) Venus
- D) The North Star

6. Which planet has an atmosphere that generates massive, high-speed wind storms that could theoretically produce wind energy?

- A) Neptune
- B) Mercury
- C) Mars
- D) The Moon

7. What is the name of the process that powers the Sun, providing the energy that makes all renewable resources on Earth possible?

- A) Combustion
- B) Nuclear fusion
- C) Friction
- D) Geothermal heating

8. Which part of Earth's crust provides geothermal energy, heat that originates from the planet's formation?

- A) The atmosphere
- B) The ocean surface
- C) The mantle and core
- D) The exosphere

9. What do solar panels on the International Space Station capture to power its onboard systems?

- A) Moonlight
- B) Starlight
- C) Solar radiation
- D) Cosmic rays

10. Which light-based energy source is used to power spacecraft far from the Sun where solar panels are less effective?

- A) Wind energy
- B) Radioisotope thermoelectric generators
- C) Tidal energy
- D) Hydroelectric dams

11. The Earth receives more solar energy in one hour than the entire world uses in how long?

- A) One year
- B) One month
- C) One day
- D) One week

12. What celestial phenomenon occurs when the Moon blocks sunlight, temporarily reducing solar power generation on Earth?

- A) Lunar eclipse
- B) Solar eclipse
- C) Meteor shower
- D) Supernova

13. Which renewable energy source relies on the water cycle, a process driven by heat from the Sun?

- A) Hydroelectric power
- B) Geothermal power
- C) Tidal power
- D) Nuclear fission

14. What is the main byproduct of the nuclear fusion process that powers our Sun?

- A) Helium
- B) Coal
- C) Oil
- D) Natural gas

15. Which planet is closest to the Sun and receives the most intense solar energy?

- A) Earth
- B) Mars
- C) Mercury
- D) Venus

16. What causes the variation in the amount of solar energy hitting different parts of the Earth throughout the year?

- A) The Earth's tilt
- B) The size of the Moon
- C) The speed of Jupiter
- D) The rotation of Venus

17. What type of light is emitted by the Sun that solar panels are designed to convert into electricity?

- A) Electromagnetic radiation
- B) Sound waves
- C) Gravitational waves
- D) Dark matter

18. Which renewable energy source is indirectly linked to the rotation of the Earth and its interaction with the Sun's heat?

- A) Wind energy
- B) Nuclear energy
- C) Coal mining
- D) Petroleum extraction