

Renewable Energy from the Cosmos

Renewable Energy · Practice Test · 20 Questions

1. What is the primary source of all solar energy harvested on Earth?

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

2. Which celestial body is primarily responsible for creating the ocean tides used in tidal energy?

- A) Venus
- B) The Moon
- C) Saturn
- D) Neptune

3. Solar panels convert energy from which type of cosmic radiation?

- A) Gamma rays
- B) Sunlight
- C) X-rays
- D) Dark matter

4. Wind energy is ultimately caused by the uneven heating of Earth's atmosphere by which star?

- A) Polaris
- B) The Sun
- C) Sirius
- D) Betelgeuse

5. What is the name of the process that powers the Sun, providing the energy we capture as solar power?

- A) Nuclear fusion
- B) Combustion
- C) Geothermal decay
- D) Photosynthesis

6. Earth's orbit around the Sun affects which renewable resource by changing the angle of sunlight throughout the year?

- A) Tidal power
- B) Solar power
- C) Geothermal energy
- D) Nuclear fission

7. Which renewable energy source relies on the Sun's energy to evaporate water, eventually resulting in rain for hydropower?

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

8. The Sun is classified as what type of celestial object?

- A) Planet
- B) Asteroid
- C) Star
- D) Moon

9. What force exerted by the Moon and Sun creates the movement of water used in tidal energy?

- A) Gravity
- B) Magnetism
- C) Friction
- D) Static electricity

10. Plants use sunlight to store energy through photosynthesis; what fuel source does this eventually create over millions of years?

- A) Coal
- B) Biomass
- C) Natural gas
- D) Uranium

11. Approximately how many minutes does it take for light from the Sun to reach Earth?

- A) 1 minute
- B) 8 minutes
- C) 60 minutes
- D) 24 hours

12. Which renewable resource is considered 'indirect' solar energy because it relies on solar-driven atmospheric changes?

- A) Geothermal
- B) Wind
- C) Tidal
- D) Nuclear

13. The amount of solar energy that reaches the Earth's upper atmosphere is known as the solar constant, and it is derived from which object?

- A) The Sun
- B) The Milky Way
- C) Mars
- D) The Moon

14. Why is solar energy considered a 'renewable' resource in space-time terms?

- A) It will last for billions of years
- B) It is artificial
- C) It is found in deep space
- D) It is static

15. What cosmic process creates the light that solar panels harvest?

- A) Radioactive decay
- B) Nuclear fusion in the Sun's core
- C) Volcanic activity on planets
- D) Supernova explosions

16. Which planetary motion is responsible for the daily cycle of solar energy availability on Earth?

- A) Rotation
- B) Revolution
- C) Precession
- D) Nutations

17. The energy trapped in biomass is actually stored chemical energy originally coming from which celestial body?

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

18. What is the visible 'surface' of the Sun that emits the solar radiation captured by Earth?

- A) The corona
- B) The photosphere
- C) The core
- D) The radiation zone

19. Which space phenomenon would theoretically block all solar energy from reaching Earth if it passed directly between the two?

- A) A lunar eclipse
- B) A total solar eclipse
- C) A comet
- D) A galaxy

20. Unlike solar and wind energy, geothermal energy is heat that originates primarily from where?

- A) The Sun
- B) The Moon
- C) The interior of the Earth
- D) Solar flares