Space Infrastructure and Civil Engineering

Civil Engineering · Answer Key · 18 Questions

1. Which planet in our solar system has a surface that scientists study for potential future habitat construction using regolith?

A) Venus
B) Mars
C) Jupiter
D) Saturn

2. What is the primary material found on the surface of the Moon that could be used as a base for building structures?

A) Regolith
B) Liquid water
C) Plastic
D) Polyester

3. Which robotic vehicle is used to explore the surface of Mars and test soil characteristics for potential engineering projects?

A) Submarine
B) Rover
C) Blimp
D) Jet ski

4. What is the name of the largest man-made structure currently orbiting the Earth?

A) International Space Station
B) The Great Wall
C) Empire State Building
D) The Shard

5. In orbital engineering, what is the force that prevents objects from floating away from the surface of a planet?

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

6. What material is commonly used to build the outer shell of spacecraft to withstand the extreme temperatures of space?

A) Cardboard
B) Aluminum alloys
C) Wood
D) Cotton

7. What is the term for the thin layer of gas surrounding a planet that engineers must consider when designing entry vehicles?

A) Atmosphere
B) Ocean
C) Crust
D) Mantle

8. Which planet is known as the 'Red Planet' and is a major focus for future human-built colony engineering?

A) Mercury
B) Mars
C) Neptune
D) Saturn

9. What type of energy is commonly harvested by solar panels to power structures built in space?

A) Wind
B) Sunlight
C) Geothermal
D) Coal

10. What is the primary structural challenge of building on the Moon compared to Earth?

A) Lack of atmosphere
B) Lack of gravity
C) High humidity
D) Heavy rainfall

11. Engineers design space habitats to protect humans from which type of harmful space radiation?

A) Infrared
B) Visible light
C) Cosmic rays
D) Radio waves

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12. The International Space Station requires constant maintenance. What is the process of fixing parts of a structure while in space?

A) Extravehicular activity
B) Deep sea diving
C) Underground mining
D) Landscaping

13. Which celestial body has the strongest gravitational pull in our solar system, affecting structural planning for space probes?

A) Earth
B) Mars
C) Sun
D) Moon

14. What device do engineers use to monitor the structural integrity of space modules from the ground?

A) Telescope
B) Sensors
C) Magnifying glass
D) Compass

15. Why are spacecraft modules often cylindrical or spherical?

A) To look pretty
B) To resist pressure
C) To hold more food
D) To be aerodynamic in water

16. What is the name of the natural satellite of Earth that serves as a potential site for a lunar base?

A) Phobos
B) Europa
C) Moon
D) Titan

17. What do engineers call the vacuum of space that makes it difficult to maintain thermal regulation in buildings?

A) Void
B) Pressure chamber
C) Wind tunnel
D) Basement

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18. Which element is the most abundant in the universe and is studied by engineers for potential fuel sources?

A) Gold

B) Hydrogen

C) Oxygen

D) Iron

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