

Artemis II Mission Reference Guide

Aerospace Engineering · Answer Key · 34 Questions

1. What is the primary purpose of the Artemis campaign?

- A) To establish a permanent base on the Moon
- B) To send astronauts to Mars
- C) To prepare humanity for lunar and Martian exploration**
- D) To study asteroids

2. Which NASA program aims to return humans to the Moon and eventually send them to Mars?

- A) Apollo
- B) Skylab
- C) Artemis**
- D) Voyager

3. What is the name of the rocket that will launch the Artemis II mission?

- A) Saturn V
- B) Space Shuttle
- C) SLS (Space Launch System)**
- D) Falcon Heavy

4. Which spacecraft will carry the astronauts on the Artemis II mission?

- A) Dragon
- B) Starliner
- C) Orion**
- D) Apollo Command Module

5. Who is the lead contractor for the Orion spacecraft?

- A) Boeing
- B) Lockheed Martin**
- C) Northrop Grumman
- D) Amentum

6. What is the approximate duration of the Artemis II mission?

- A) 3 days
- B) 7 days
- C) 10 days**
- D) 20 days

7. Which of the following is NOT a primary objective of the Artemis II mission?

- A) Test Orion's life support systems with a crew
- B) Gather data on human health in deep space
- C) Land the first humans on the Moon's South Pole**
- D) Practice flight maneuvers for future Artemis missions

8. What is the main purpose of the ARChER research on Artemis II?

- A) To study the effects of deep space on sleep, stress, cognition, and teamwork**
- B) To test new propulsion systems
- C) To monitor radiation levels in space
- D) To analyze lunar soil samples

9. Which facility is responsible for the integration, processing, launch, and recovery of the SLS rocket and Orion spacecraft?

- A) Marshall Space Flight Center
- B) Johnson Space Center
- C) Kennedy Space Center**
- D) Jet Propulsion Laboratory

10. What is the purpose of the Vehicle Assembly Building (VAB)?

- A) To manufacture rocket components
- B) To assemble and test rockets and spacecraft**
- C) To launch rockets
- D) To recover spacecraft

11. Launch Pad 39B is being upgraded to support which rocket?

- A) Saturn V
- B) Space Shuttle
- C) SLS**
- D) All of the above

12. What system is designed to dampen sound, vibrations, and extreme heat during liftoff?

- A) Sound Suppression System**
- B) Flame Trench
- C) Lightning Towers
- D) Emergency Egress System

13. The SLS rocket is derived from which previous NASA program's hardware?

- A) Apollo
- B) Skylab
- C) Space Shuttle**
- D) International Space Station

14. What are the primary propellants used by the SLS rocket's core stage engines?

- A) Kerosene and Liquid Oxygen
- B) Liquid Hydrogen and Liquid Oxygen**
- C) Solid Rocket Fuel
- D) Methane and Liquid Oxygen

15. How many RS-25 engines power the SLS core stage?

- A) 1
- B) 2
- C) 3
- D) 4**

16. Who is the prime contractor for the SLS solid rocket boosters?

- A) Boeing
- B) L3Harris Technologies
- C) Northrop Grumman**
- D) Aerojet Rocketdyne

17. What is the primary function of the Interim Cryogenic Propulsion Stage (ICPS)?

- A) To provide main propulsion for Orion
- B) To launch the SLS rocket
- C) To serve as an upper stage for SLS and support proximity operations demonstration**
- D) To house the Orion crew module

18. What is the purpose of the Orion Stage Adapter?

- A) To connect the SLS core stage to the ICPS
- B) To house CubeSat payloads and connect the ICPS to the Orion spacecraft**
- C) To provide propulsion for Orion
- D) To protect the Orion spacecraft during launch

19. What system on Orion is designed to pull the spacecraft and crew to safety in the event of an emergency during launch or ascent?

- A) Launch Abort System (LAS)**
- B) Emergency Egress System
- C) Radiation Shelter
- D) Crew Module Uprighting System

20. What is the primary component of Orion that returns to Earth at the end of the mission?

- A) Service Module
- B) Launch Abort System
- C) Crew Module**
- D) European Service Module

21. What material is the world's largest ablative heat shield on the Orion capsule made of?

- A) Carbon-carbon
- B) Avcoat**
- C) Silica fiber
- D) Titanium

22. How many parachutes are part of Orion's system to slow the crew module for splashdown?

- A) 3
- B) 7
- C) 11**
- D) 15

23. What is the function of the European Service Module?

- A) To provide propulsion, power, and critical supplies for Orion**
- B) To house the crew
- C) To protect Orion from radiation
- D) To deploy CubeSats

24. Which NASA center is home to the SLS Program Office and manages the development of the rocket?

- A) Kennedy Space Center
- B) Johnson Space Center
- C) Marshall Space Flight Center**
- D) Stennis Space Center

25. Where is the core stage of the SLS rocket manufactured?

- A) Marshall Space Flight Center
- B) Michoud Assembly Facility**
- C) Stennis Space Center
- D) Kennedy Space Center

26. What role does Stennis Space Center play in the SLS program?

A) Manufacturing the Orion spacecraft

B) Testing rocket engines

C) Assembling the SLS rocket

D) Managing launch operations

27. What is the purpose of the Near Space Network and Deep Space Network for Artemis missions?

A) To monitor weather on the Moon

B) To provide communications and navigation services

C) To conduct scientific experiments

D) To recover the Orion capsule

28. What new communications capability will be demonstrated during the Artemis II mission?

A) Satellite phone communication

B) Laser communications

C) Radio wave transmission

D) Fiber optic communication

29. Which of the following is an industry partner for the SLS program?

A) SpaceX

B) Blue Origin

C) Boeing

D) Virgin Galactic

30. What is the total height of Mobile Launcher 1 above the ground?

A) 200 feet

B) 300 feet

C) 400 feet

D) 500 feet

31. What is the approximate weight of the Crawler-Transporter?

A) 1 million pounds

B) 3 million pounds

C) 6.6 million pounds

D) 10 million pounds

32. What is the maximum thrust generated by the SLS boosters at launch?

A) 3.6 million pounds

B) 8.8 million pounds

C) 14.6 million pounds

D) 16 million pounds

33. What is the primary purpose of the Orion's environmental control and life support systems?

A) To provide entertainment for the crew

B) To maintain a habitable and safe environment for astronauts

C) To communicate with mission control

D) To propel the spacecraft

34. How many crew members will be aboard the Orion spacecraft for the Artemis II mission?

A) 2

B) 3

C) 4

D) 5