

Psyche Quiz Question Dictionary

1. What is Psyche?
 - a) A planet
 - b) An asteroid (Correct)
 - c) A star
 - d) A moon
2. When was the Psyche mission selected?
 - a) December 25, 2016
 - b) January 4, 2017 (Correct)
 - c) March 10, 2018
 - d) February 2, 2017
3. What kind of mission is Psyche?
 - a) Human mission
 - b) Space telescope mission
 - c) NASA's Discovery Program mission (Correct)
 - d) Mars mission
4. What can visiting the Psyche asteroid tell us?
 - a) Weather patterns
 - b) Composition of gas giants
 - c) Earth's core formation (Correct)
 - d) History of comets
5. Why can't we visit Earth's core?
 - a) Lack of interest
 - b) Technological limitations (Correct)
 - c) Prohibitive cost
 - d) Environmental concerns
6. When will the Psyche spacecraft stay in orbit around the asteroid?
 - a) At launch
 - b) After reaching Jupiter
 - c) After completing the mission (Correct)
 - d) Never
7. How much does the Psyche mission cost?
 - a) \$500 million

- b) \$1 billion
- c) \$850 million (Correct)
- d) \$2 billion

8. What are the Psyche mission science goals?

- a) Study of exoplanets
- b) Exploration of gas giants
- c) Understanding iron cores (Correct)
- d) Search for extraterrestrial life

9. Who is building the Psyche mission?

- a) SpaceX
- b) NASA's Ames Research Center
- c) Arizona State University (Correct)
- d) European Space Agency

10. How can you learn more about the Psyche mission?

- a) Only through newspapers
- b) Visit psyche.asu.edu (Correct)
- c) Watch TV documentaries
- d) Ask your teacher

11. When was the Psyche asteroid discovered?

- a) 1750
- b) 1852 (Correct)
- c) 1901
- d) 2000

12. Where is the Psyche asteroid located?

- a) Between Earth and Venus
- b) Beyond Pluto
- c) Main asteroid belt (Correct)
- d) Near the Sun

13. What is the Psyche asteroid made of?

- a) Only metal
- b) Only rock
- c) Mixture of rock and metal (Correct)
- d) Ice and gas

14. How do we know what the Psyche asteroid is made of?

- a) By tasting it
- b) Using radar albedo and thermal inertia (Correct)
- c) Guessing
- d) By smelling it

15. When did we find out what Psyche is made of?

- a) 2005
- b) 2010 (Correct)
- c) 2015
- d) 2020

16. What do scientists think the Psyche asteroid is?

- a) A piece of the Moon
- b) Remnants of a comet
- c) Metal from the core of a planetesimal (Correct)
- d) A space station

17. How long is a day on Psyche?

- a) 12 hours
- b) 24 hours
- c) 4 hours and 12 minutes (Correct)
- d) 1 hour

18. How long is a year on Psyche?

- a) 1 Earth year
- b) 10 Earth years
- c) 5 Earth years (Correct)
- d) 2 Earth years

19. How far is the Psyche asteroid from the Sun?

- a) 50 million miles
- b) 100 million miles
- c) 280 million miles (Correct)
- d) 500 million miles

20. How much does the Psyche asteroid weigh?

- a) 1 sextillion kg
- b) 10 sextillion kg
- c) 27 sextillion kg (Correct)

d) 50 sextillion kg

21. How dense is the Psyche asteroid?

- a) 1,000 kg/m³
- b) 2,500 kg/m³
- c) 3,400,100 kg/m³ (Correct)
- d) 5,000 kg/m³

22. Does the Psyche asteroid have gravity?

- a) No
- b) Yes, similar to Earth
- c) Yes, but less than Earth (Correct)
- d) Yes, more than Earth

23. How big is the Psyche asteroid?

- a) 100 x 80 x 60 kilometers
- b) 200 x 150 x 120 kilometers
- c) 279 x 232 x 189 kilometers (Correct)
- d) 300 x 250 x 200 kilometers

24. What does the Psyche asteroid look like?

- a) Smooth and round
- b) Pixelated black and white image (Correct)
- c) Red and dusty
- d) Covered in ice

25. How big will the Psyche spacecraft be?

- a) 10 meters long
- b) 20 meters long
- c) ~81 feet long (Correct)
- d) ~100 feet long

26. What launch vehicle will the Psyche mission use?

- a) NASA's SLS
- b) SpaceX Falcon Heavy (Correct)
- c) Blue Origin New Glenn
- d) Russian Soyuz

27. How will the Psyche spacecraft get to Psyche?

- a) Rocket boosters

- b) Solarelectric propulsion (Correct)
- c) Nuclear propulsion
- d) Ion thrusters

28. What kind of propellant will the Psyche spacecraft use?

- a) Hydrogen
- b) Kerosene
- c) Xenon (Correct)
- d) Oxygen

29. How far will the Psyche spacecraft travel?

- a) 1 billion kilometers
- b) 2 billion kilometers (Correct)
- c) 3 billion kilometers
- d) 4 billion kilometers

30. How will the spacecraft orbit Psyche?

- a) Fixed orbit
- b) Circular orbit
- c) From four staging

31. What are the four stages of science operations around Psyche?

- a) A, B, C, D (Correct)
- b) Alpha, Beta, Gamma, Delta
- c) First, Second, Third, Fourth
- d) One, Two, Three, Four

32. How many instruments are on the Psyche spacecraft?

- a) Two
- b) Three (Correct)
- c) Four
- d) Five

33. How much raw data does the Psyche mission expect to deliver?

- a) 500 GB
- b) 1 TB
- c) 620 GB (Correct)
- d) 800 GB

34. What format will the Psyche mission data be received in?

- a) JPEG
- b) PDF
- c) NASA PDS4 formats (Correct)
- d) Excel

35. What does the Psyche Multispectral Imager do?

- a) Measures temperature
- b) Provides high resolution images (Correct)
- c) Detects magnetic fields
- d) Studies atmospheric composition

36. Where is the team responsible for the Psyche Multispectral Imager based?

- a) MIT
- b) ASU
- c) Arizona State University (Correct)
- d) SpaceX

37. What does the Psyche Gamma Ray and Neutron Spectrometer detect?

- a) Temperature changes
- b) Elemental composition (Correct)
- c) Atmospheric pressure
- d) Surface topography

38. Where is the team responsible for the Psyche Magnetometer based?

- a) APL at Johns Hopkins University
- b) MIT and DTU (Correct)
- c) SpaceX
- d) Lawrence Livermore National Laboratory

39. What does the Psyche Radio Science measure?

- a) Atmospheric density
- b) Gravity field (Correct)
- c) Solar radiation
- d) Magnetic fields

40. What is the purpose of Deep Space Optical Communication (DSOC)?

- a) Capture images of the asteroid
- b) Test new laser communication technology (Correct)
- c) Measure atmospheric composition
- d) Transmit radio signals

41. How big is the Psyche spacecraft bus (body)?
- a) 5 meters long
 - b) ~10 feet long by almost 8 feet wide (Correct)
 - c) 15 meters long
 - d) ~20 feet long by 15 feet wide
42. Who provides launch services for the Psyche mission?
- a) Blue Origin
 - b) SpaceX (Correct)
 - c) NASA's Ames Research Center
 - d) Roscosmos
43. What type of propulsion does the Psyche spacecraft use?
- a) Chemical propulsion
 - b) Solarelectric propulsion (Correct)
 - c) Nuclear propulsion
 - d) Ion propulsion
44. What is the Psyche spacecraft's estimated travel distance to Psyche?
- a) 1 billion miles
 - b) ~1.5 billion miles (Correct)
 - c) 2 billion miles
 - d) 3 billion miles
45. How long will the Psyche mission travel from launch to the end of the primary mission?
- a) ~2 billion miles
 - b) ~3 billion miles
 - c) ~3.3 billion miles (Correct)
 - d) ~4 billion miles
46. What institution is responsible for the Psyche DSOC technology?
- a) APL at Johns Hopkins University
 - b) SpaceX
 - c) Jet Propulsion Laboratory (Correct)
 - d) MIT
47. Who is the Principal Investigator (PI) of the Psyche mission?
- a) Elon Musk
 - b) ASU President

- c) NASA Administrator
- d) [Need to check Psyche Team Page for correct answer] (Correct)

48. What does the PI oversee in the Psyche mission?

- a) Only financial matters
- b) Scientific integrity and execution (Correct)
- c) Social media promotion
- d) Rocket launch procedures

49. Who are the Psyche science partners?

- a) Only ASU
- b) Multiple institutions (Correct)
- c) Only SpaceX
- d) International Space Station (ISS)

50. Where can you find the full Psyche team list?

- a) NASA's official website
- b) Psyche Mission's Twitter account
- c) [Need to check Psyche Team Page for correct answer] (Correct)
- d) Your school's library