

Chapter 01 Test Bank **KEY**

<https://sellidocx.com/products/test-bank-the-physical-universe-16e-krauskopf>

1. What distinguishes the scientific method from other ways of looking at the natural world is
- A. the eternal truth of its laws and theories.
 - B. its replacement of existing laws and theories at regular intervals.
 - C. its reliance on the opinions of expert scientists to decide which laws and theories to believe.
 - D.** its reliance on experiment and observation.

Accessibility: Keyboard Navigation

Blooms: 2. Understand

Gradable: automatic

Section: 01.02

Topic: Scientific Method

2. A regularity in observed data or a relationship between different quantities is usually called a
- A. hypothesis.
 - B.** law.
 - C. theory.
 - D. model.

Accessibility: Keyboard Navigation

Blooms: 1. Remember

Gradable: automatic

Section: 01.01

Topic: Scientific Method

3. When first proposed, a scientific idea is usually called a
- A.** hypothesis.
 - B. law.
 - C. theory.
 - D. model.

Accessibility: Keyboard Navigation

Blooms: 1. Remember

Gradable: automatic

Section: 01.01

Topic: Scientific Method

4. Scientific theories

- A.** must be constantly reviewed to see whether they are in accord with new experimental observations.
- B. represent guesses that have not yet been compared with observational data.
- C. are summaries of particular experiments.
- D. are laws of nature not subject to revision.

Accessibility: Keyboard Navigation

Blooms: 2. Understand

Gradable: automatic

Section: 01.01

Topic: Scientific Method

5. Living things

- A. were created as they are today several thousand years ago.
- B. were created as they are today several billion years ago.
- C. were created several thousand years ago and have evolved since then.
- D.** have evolved throughout the earth's history.

Accessibility: Keyboard Navigation

Blooms: 2. Understand

Gradable: automatic

Section: 01.02

Topic: Evolution

6. The object in the sky that lies very nearly on an extension of the earth's axis is

- A. the sun.
- B. the moon.
- C. Mercury.
- D. Polaris.

Accessibility: Keyboard Navigation

Blooms: 1. Remember

Gradable: automatic

Section: 01.03

Topic: The Night Sky

7. The stars in a constellation

- A. are about the same age.
- B. are about the same distance from the earth.
- C. form a pattern in the sky as seen from the earth.
- D. are members of the solar system.

Accessibility: Keyboard Navigation

Blooms: 1. Remember

Figure: 01.04

Gradable: automatic

Section: 01.03

Topic: Constellation

8. The time at which a given star rises above the horizon each night is

- A. earlier than the night before.
- B. the same as the night before.
- C. later than the night before.
- D. Any of the choices, depending on which star is involved.

Accessibility: Keyboard Navigation

Blooms: 1. Remember

Blooms: 2. Understand

Gradable: automatic

Section: 01.03

Topic: The Night Sky

9. Relative to the stars, the moon seems to move

- A. northward.
- B. southward.
- C. eastward.
- D. westward.

Accessibility: Keyboard Navigation

Blooms: 1. Remember

Blooms: 2. Understand

Gradable: automatic

Section: 01.03

Topic: The Night Sky

10. A year is the time needed for

- A. the sun to migrate completely around the sky.
- B. the moon to migrate completely around the sky.
- C. the earth to turn completely on its axis.
- D. None of the choices are correct.

Accessibility: Keyboard Navigation
Blooms: 1. Remember
Gradable: automatic
Section: 01.03
Topic: Cycles of the Sky

11. A week is the time needed for

- A. the sun to drift completely around the sky.
- B. the moon to drift completely around the sky.
- C. the earth to turn completely on its axis.
- D. None of the choices are correct.

Accessibility: Keyboard Navigation
Blooms: 1. Remember
Gradable: automatic
Section: 01.03
Topic: Cycles of the Sky

12. A day is the time needed for

- A. the sun to drift completely around the sky.
- B. the moon to drift completely around the sky.
- C. the earth to turn completely on its axis.
- D. None of the choices are correct.

Accessibility: Keyboard Navigation
Blooms: 1. Remember
Gradable: automatic
Section: 01.05
Topic: Cycles of the Sky

13. The length of the year is

- A. slightly less than 365 days.
- B. exactly 365 days.
- C. slightly more than 365 days.
- D. Any of the above choices, depending on the year.

Accessibility: Keyboard Navigation
Blooms: 1. Remember
Gradable: automatic
Section: 01.05
Topic: Cycles of the Sky

14. A planet that cannot be seen with the unaided eye is

- A.** Neptune.
- B. Jupiter.
- C. Mars.
- D. Mercury.

Accessibility: Keyboard Navigation

Blooms: 1. Remember

Figure: 01.08

Gradable: automatic

Section: 01.03

Topic: Solar System

15. Arrange the following planets in the order of their distance from the sun.

- 1. Venus
- 2. Mars
- 3. Earth
- 4. Mercury

- A.** 4, 1, 3, 2
- B. 1, 4, 3, 2
- C. 2, 3, 1, 4
- D. 3, 2, 4, 1

Accessibility: Keyboard Navigation

Blooms: 1. Remember

Figure: 01.08

Gradable: automatic

Section: 01.05

Topic: Solar System

16. In which one or more of the following is the earth assumed to be the center of the universe?

- A.** the Ptolemaic system.
- B. the Copernican system.
- C. Kepler's laws of planetary motion.
- D. Newton's law of gravity.

Accessibility: Keyboard Navigation

Blooms: 1. Remember

Figure: 01.07

Gradable: automatic

Section: 01.04

Topic: History of Astronomy

17. The discovery that the planetary orbits are ellipses rather than circles was made by

- A. Ptolemy.
- B. Copernicus.
- C.** Kepler.
- D. Newton.

Accessibility: Keyboard Navigation

Blooms: 1. Remember

Gradable: automatic

Section: 01.06

Topic: History of Astronomy

18. Kepler modified

- A. the Ptolemaic system.
- B.** the Copernican system.
- C. Newton's law of gravity.
- D. the theory of the tides.

Accessibility: Keyboard Navigation

Blooms: 1. Remember

Gradable: automatic

Section: 01.06

Topic: History of Astronomy

19. The period of the earth's orbit around the sun is

- A. one day.
- B. one week.
- C. one month.
- D.** one year.

Accessibility: Keyboard Navigation

Blooms: 1. Remember

Blooms: 2. Understand

Gradable: automatic

Section: 01.05

Topic: Solar System

20. The time needed for a planet to orbit the sun

- A. is the same for all planets.
- B. depends on the size of the planet.
- C. depends on the mass of the planet.
- D.** depends on the average distance of the planet from the sun.

Accessibility: Keyboard Navigation

Blooms: 1. Remember

Blooms: 2. Understand

Gradable: automatic

Section: 01.06

Topic: Solar System

21. The speed of a planet in its orbit

- A. is always the same.
- B. is least when it is closest to the sun.
- C. is highest when it is closest to the sun.
- D. Any of the above choices, depending on the planet.

Accessibility: Keyboard Navigation
Blooms: 2. Understand
Figure: 01.11
Gradable: automatic
Section: 01.06
Topic: Solar System

22. Astrology

- A. provides a scientific basis for planning our lives.
- B. correctly predicts the future.
- C. is based on the scientific method.
- D. is nonsense.

Accessibility: Keyboard Navigation
Blooms: 1. Remember
Blooms: 2. Understand
Gradable: automatic
Section: 01.07
Topic: History of Astronomy

23. The scientist who showed that gravity accounts for Kepler's laws of planetary motion was

- A. Newton.
- B. Brahe.
- C. Einstein.
- D. Galileo.

Accessibility: Keyboard Navigation
Blooms: 1. Remember
Gradable: automatic
Section: 01.08
Topic: Gravity
Topic: History of Astronomy

24. Gravity is not

- A. a fundamental force.
- B. responsible for holding the moon in orbit around the earth.
- C. responsible for holding atoms and molecules together.
- D. active throughout the universe.

Accessibility: Keyboard Navigation
Blooms: 2. Understand
Gradable: automatic
Section: 01.08
Topic: Gravity

25. Stars and planets are round because

- A. a sphere is the most natural shape.
- B. they rotate.
- C. gravity forces them into this shape.
- D. friction in space grinds them into this shape.

Accessibility: Keyboard Navigation

Blooms: 2. Understand

Figure: 01.18

Gradable: automatic

Section: 01.09

Topic: Gravity

26. If the earth were to revolve on its axis slower than it does today, its shape

- A. would be closer to a perfect sphere.
- B. would be farther from a perfect sphere.
- C. and size would be unchanged.
- D. would not change but it would expand in size.

Accessibility: Keyboard Navigation

Blooms: 2. Understand

Blooms: 3. Apply

Figure: 01.19

Gradable: automatic

Section: 01.09

Topic: Gravity

Topic: Rotational Motion

27. In most parts of the world high tides occur approximately

- A. twice a day.
- B. once a day.
- C. once a week.
- D. once every two weeks.

Accessibility: Keyboard Navigation

Blooms: 1. Remember

Figure: 01.20

Gradable: automatic

Section: 01.10

Topic: Gravity

28. If the earth had no moon,

- A. there would be no tides.
- B. there would be one high and one low tide per day.
- C. the average tidal range would be smaller.
- D. the average tidal range would be greater.

Accessibility: Keyboard Navigation

Blooms: 4. Analyze

Gradable: automatic

Section: 01.10

Topic: Gravity

29. Which of the following statements is true?

- A. High tides are caused by the sun, low tides by the moon.
- B. Low tides are caused by the sun, high tides by the moon.
- C. The moon is chiefly responsible for the tides, with the sun's influence modifying the tidal range.
- D. The sun is chiefly responsible for the tides, with the moon's influence modifying the tidal range.

Accessibility: Keyboard Navigation

Blooms: 1. Remember

Gradable: automatic

Section: 01.10

Topic: Gravity

30. When the sun, the earth, and the moon are all in line,

- A. high tides and low tides are both higher than usual.
- B. high tides and low tides are both lower than usual.
- C. high tides are higher than usual and low tides are lower than usual.
- D. high tides are lower than usual and low tides are higher than usual.

Accessibility: Keyboard Navigation

Blooms: 1. Remember

Blooms: 2. Understand

Gradable: automatic

Section: 01.10

Topic: Gravity

31. In the distant past, the length of the day was

- A. shorter than 24h.
- B. 24h as at present.
- C. longer than 24h.
- D. impossible to determine.

Accessibility: Keyboard Navigation

Blooms: 1. Remember

Figure: 01.20

Gradable: automatic

Section: 01.10

Topic: Gravity

32. The British unit of length closest to the meter is the

- A. inch.
- B. foot.
- C. yard.
- D. mile.

Accessibility: Keyboard Navigation

Blooms: 1. Remember

Gradable: automatic

Section: 01.12

Topic: SI Units

33. A person is 5 ft 8.0 in. tall. This is equivalent to

- A. 173 cm.
- B. 177 cm.
- C. 207 cm.
- D. 223 cm.

Accessibility: Keyboard Navigation

Blooms: 5. Evaluate

Gradable: automatic

Section: 01.12

Topic: SI Units

34. The number of cubic centimeters in a cubic foot is about

- A. 1.7×10^3 .
- B. 1.7×10^4 .
- C.** 2.8×10^4 .
- D. 1.7×10^5 .

Accessibility: Keyboard Navigation
Blooms: 5. Evaluate
Gradable: automatic
Section: 01.12
Topic: SI Units

35. The prefix giga stands for

- A. 1,000,000.
- B.** 1,000,000,000.
- C. 1/1,000,000.
- D. 1/1,000,000,000.

Accessibility: Keyboard Navigation
Blooms: 1. Remember
Gradable: automatic
Section: 01.12
Topic: SI Units

36. The shortest of the following is

- A. 10^4 in.
- B. 10^4 m.
- C. 10^3 ft.
- D.** 0.1 mi.

Accessibility: Keyboard Navigation
Blooms: 2. Understand
Blooms: 4. Analyze
Gradable: automatic
Section: 01.12
Topic: SI Units

37. The longest of the following is

- A. 1 mm.
- B.** 0.00001 km.
- C. 0.01 in.
- D. 0.001 ft.

Accessibility: Keyboard Navigation
Blooms: 2. Understand
Blooms: 4. Analyze
Gradable: automatic
Section: 01.12
Topic: SI Units

38. A centimeter is

- A. 0.001 m.
- B. 0.01 m.**
- C. 0.1 m.
- D. 10 m.

Accessibility: Keyboard Navigation
Blooms: 2. Understand
Blooms: 4. Analyze
Gradable: automatic
Section: 01.12
Topic: SI Units

39. A meter is not equal to

- A. 100 cm.
- B. 10^3 mm.
- C. 0.01 km.**
- D. 10^{-3} km.

Accessibility: Keyboard Navigation
Blooms: 2. Understand
Blooms: 4. Analyze
Gradable: automatic
Section: 01.12
Topic: SI Units

40. The size of a picture is given as 84 cm by 255 cm. Since $(84)(255) = 2.142$ exactly, the area of the picture is correctly expressed as

- A. 2.142 m^2 .
- B. 2.14 m^2 .
- C. 2.1 m^2 .**
- D. 2 m^2 .

Accessibility: Keyboard Navigation
Blooms: 2. Understand
Blooms: 3. Apply
Gradable: automatic
Section: 01.12
Topic: SI Units

41. A nautical mile (nm) is 6076 ft long, and a knot (kn) is a unit of speed equal to 1 nm per hour. How many feet per second does a 10-kn boat move through the water?

- A. 0.059 ft/s
- B. 0.17 ft/s
- C. 1.7 ft/s
- D. 17 ft/s**

Accessibility: Keyboard Navigation
Blooms: 3. Apply
Gradable: automatic
Section: 01.12
Topic: SI Units

Chapter 01 Test Bank Summary

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