Chapter 01 Test Bank KEY

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 moive 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

Category	*# of Questions*
Accessibility: Keyboard Navigation	**41**
Blooms: 1. Remember	**25**
Blooms: 2. Understand	**18**
Blooms: 3. Apply	**3**
Blooms: 4. Analyze	**5**
Blooms: 5. Evaluate	**2**
Figure: 01.04	**1**
Figure: 01.07	**1**
Figure: 01.08	**2**
Figure: 01.11	**1**
Figure: 01.18	**1**
Figure: 01.19	**1**
Figure: 01.20	**2**
Gradable: automatic	**41**
Section: 01.01	**3**
Section: 01.02	**2**
Section: 01.03	**7**
Section: 01.04	**1**
Section: 01.05	**4**
Section: 01.06	**4**
Section: 01.07	**1**
Section: 01.08	**2**
Section: 01.09	**2**
Section: 01.10	**5**
Section: 01.12	**10**
Topic: Constellation	**1**
Topic: Cycles of the Sky	**4**
Topic: Evolution	**1**
Topic: Gravity	**9**
Topic: History of Astronomy	**5**
Topic: Rotational Motion	**1**
Topic: Scientific Method	**4**
Topic: SI Units	**10**
Topic: Solar System	**5**
Topic: The Night Sky	**3**