

SECTION 27.2 *The Moon*

In your notes, locate the characteristics and history of the Moon.

Circle the letter of the choice that best completes the statement.

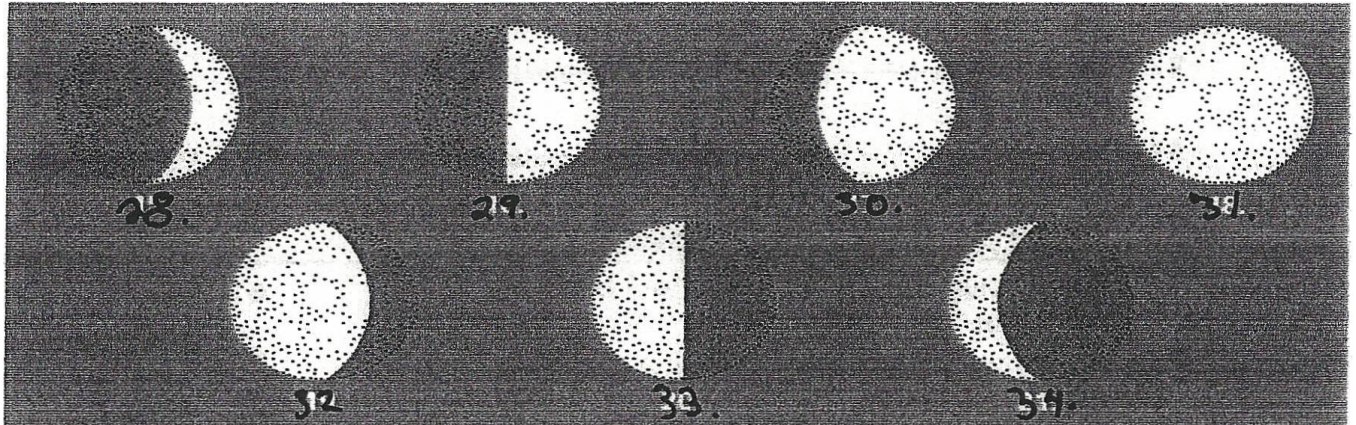
- Temperatures on the Moon's surface are
 - always very hot. .
 - either very hot or very cold,
 - always very cold
 - moderate
- The light-colored, mountainous regions of the Moon are called
 - maria.
 - impact craters.
 - rilles.
 - highlands.
- The dark, smooth plains on the Moon are called
 - maria.
 - impact craters.
 - rilles.
 - highlands
- The features on the Moon formed by objects crashing into its surface are
 - rilles.
 - mountain ranges.
 - impact craters.
 - regolith
- The material that falls back to the Moon's surface after an impact blast is
 - regolith.
 - quartz.
 - ejecta.
 - lava
- Long trails of ejecta on the Moon's surface are called
 - rilles.
 - rays.
 - plains.
 - highlands.
- Meandering valley like features on the Moon's surface are called
 - rays.
 - ejecta.
 - rilles.
 - craters.
- There is no erosion, other than surface creep and erosion due to impacts, on the Moon because there is no
 - lava or flowing water.
 - atmosphere or flowing water
 - ejecta *or* lava,
 - ejecta or atmosphere.
- After a long period of impacts, the Moon's impact basins filled with
 - water.
 - lava.
 - feldspar.
 - breccia.
- Scientists hypothesize that the Moon's crust is twice as thick
 - in the highlands.
 - in the maria.
 - on the side seen from Earth.
 - on the far side.
- The layers of the Moon, from the surface inward, are the
 - upper mantle, lower mantle, crust, and core.
 - crust, core, upper mantle, and lower mantle.
 - core, crust, upper mantle, and lower mantle,
 - crust, upper mantle, lower mantle, and core.
- According to the most accepted theory of the Moon's formation, the Moon is made from
 - materials from asteroids and comets.
 - materials from Earth only.
 - materials from Mars.
 - materials from Earth and the body that hit it.
- The most accepted theory about the origin of the Moon explains why the
 - the Moon and Earth have completely different compositions.
 - the Moon is so far away from Earth.
 - the same side of the Moon is always seen from Earth.
 - the Moon has very little regolith.

SECTION 27.3 *The Sun-Earth-Moon System*

In the *space* at the left, circle "A" for *true* if the statement is initially true; if the statement is initially false, circle "B"
THEN change the italicized word or phrase to make it true.

- | | | |
|---|---|--|
| A | B | 14. All societies base their calendars and timekeeping systems on the <u>apparent motion of the Sun</u> and Moon. |
| A | B | 15. The Sun, Moon, and stars appear to rise in the east and set in the west because of the rotation of <u>the Moon</u> . |
| A | B | 16. You can demonstrate that Earth rotates through the use of a <u>Foucault pendulum</u> . |
| A | B | 17. The period from one sunrise or sunset to the next is called the <u>solar day</u> . |
| A | B | 18. The length of time it takes for the Moon to go through a complete cycle of phases is called the <u>lunar month</u> . |
| A | B | 19. Annual variations in the length of the day and in temperatures are dependent on the <u>longitude</u> where you live. |
| A | B | 20. The plane of Earth's orbit about the Sun is called the <u>solstice</u> . |
| A | B | 21. The seasons are caused by Earth's orbit around the Sun in combination with the <u>tilt of Earth's axis</u> . |
| A | B | 22. The hemisphere that is tilted toward the Sun experiences <u>winter</u> . |
| A | B | 23. A <u>solar eclipse</u> occurs when the Moon passes through Earth's shadow. |
| A | B | 24. On the <u>summer solstice</u> , the number of daylight hours for the northern hemisphere is at a maximum. |
| A | B | 25. During the northern hemisphere's summer, the sun appears <u>lower</u> in the sky than it does in winter. |
| A | B | 26. On the winter solstice, the number of daylight hours is at its <u>minimum</u> . |
| A | B | 27. The lengths of day and night are equal for <u>both the northern and southern hemispheres</u> on the vernal equinox |

SECTION 27.3 Identify each phase of the Moon below by SELECT the BEST choice



28. Illustration 28

- A. waning gibbous
- B. waxing crescent

- C. waxing gibbous
- D. waning crescent

29. Illustration 29

- A. third quarter
- B. first quarter

- C. new moon
- D. full moon

30. Illustration 30

- A. waning gibbous
- B. waxing crescent

- C. waxing gibbous
- D. waning crescent

31. Illustration 31

- A. third quarter
- B. first quarter

- C. new moon
- D. full moon

32. Illustration 32

- A. waning gibbous
- B. waxing crescent

- C. waxing gibbous
- D. waning crescent

33. Illustration 33

- A. third quarter
- B. first quarter

- C. new moon
- D. full moon

34. Illustration 34

- A. waning gibbous
- B. waxing crescent

- C. waxing gibbous
- D. waning crescent

Why is the Moon invisible from Earth during a new moon?

The Sun-Earth-Moon System, continued

For each item in Column A, SELECT the BEST letter of the matching item in Column B.

E. mn A

*Column A,**Column B*

35. The closest point to Earth in the Moon's orbit
36. The inner portion of the shadow cast on Earth by the Moon
37. Blocking of the Sun's light by the Moon passing between Earth and the Sun
38. Farthest point from Earth in the Moon's orbit

- A. Umbra
- B. Perigee
- C. Apogee
- D. Solar eclipse
- E. Penumbra

*Column A**Column B*

39. State at which the Moon's orbital and rotational periods are equal
40. Occurs when the Moon passes through Earth's shadow
41. Length of time it takes for the Moon to go through a complete cycle of phases
42. The daily rise and fall of Earth's oceans caused by the gravitational pull of the Moon and the Sun
43. Outer portion of the shadow cast on Earth by the Moon

- A. Synchronous Rotation
- B. Penumbra
- C. Tide
- D. Lunar month
- E. Lunar eclipse

44. The fact that Earth observers always see the same side of the Moon is explained by the Moon's

- A. Eclipse
- B. penumbra.
- C. gravity
- D. synchronous rotation

45. The tides on Earth are caused by the gravitational pull of the

- A. the Moon only
- B. the Sun only
- C. both the Moon and the Sun.
- D. neither the Moon nor the Sun

46. During an annular solar eclipse, the Moon

- A. is near perigee.
- B. does not completely block the Sun.
- C. passes through Earth's shadow,
- D. always appears reddish in color.