

Question 1

Astrology is the folklore that arose from watching alignments in the night sky and the belief that these "celestial events" controlled human events. A 1960's folk song, "The Age of Aquarius" has numerous astrology references that relate to the positions of objects in the sky. The song has a line: "When the moon is in the 7th house, and Jupiter aligns with Mars, then peace will guide the planet..." From your knowledge of the stellar constellations and the celestial coordinate system, what does this line mean?

- A) When Jupiter and Mars align with the sun, and it is the 7th full moon of the year, then peace...
- B) When Jupiter and Mars align in the sky, and the moon is in the 7th constellation of the zodiac, then peace...
- C) When the moon crosses the zodiac in the 7th month of the year, and Jupiter and Mars align with the moon, then peace...
- D) It is just a nonsense line with no meaning.

Answer: <https://biology-forums.com/index.php?topic=374347>

Question 2

Which of the following is not a type of fog caused by cooling of near surface air to below its dew point?

- A) advection fog
- B) frontal fog
- C) radiation fog
- D) upslope fog

Answer: <https://biology-forums.com/index.php?topic=374057>

Question 3

The change of state from a gas to a liquid is called _____.

Answer: <https://biology-forums.com/index.php?topic=374078>

Question 4

A low pressure center is called a(n) _____.

Answer: <https://biology-forums.com/index.php?topic=374157>

Question 5

Polar regions receive nearly continuous sunlight in the summer months so why doesn't the mean temperature during those months get above 10°C?

- A) The reflection of the sun's energy (albedo) by the ice and snow prevents the area from warming.
- B) The sun's energy has to heat the frozen atmosphere in order to reach the land and that takes all summer.
- C) The sun is too low in the sky to be an effective heat source.
- D) In the summer, the winds blow from the cold oceans and keep the temperatures low.
- E) The ozone layer has thinned significantly over the polar regions and this prevents heat from being trapped near the surface in those areas.

Answer: <https://biology-forums.com/index.php?topic=374268>

Question 6

If the glacial budget is balanced (accumulation equals wastage), then _____.

- A) the terminus of the glacier is stationary
- B) the ice front will retreat
- C) the ice front will advance
- D) the glacier will not flow downhill

Answer: <https://biology-forums.com/index.php?topic=373177>

Question 7

Geologists may choose to lick a mineral to identify it. What mineral is the geologist expecting with this test?

- A) NaCl (halite) or KCl (sylvite)
- B) a sulfide bearing rock which will taste like rotten eggs
- C) None, it clears the dust off the sample so he/she can see if more clearly.
- D) None, they are clearing the hydrochloric acid from the sample to rerun a test for calcite.

Answer: <https://biology-forums.com/index.php?topic=372613>

Question 8

Paleontology is the study of _____.

- A) ancient life
- B) paleo meaning old, and ontology referring to philosophical study of nature, so paleontology is the study of old nature
- C) prehistoric human history
- D) none of the above

Answer: <https://biology-forums.com/index.php?topic=373540>

Question 9

How do freezing, thawing, wetting, and drying contribute to soil creep?

- A) Gravity exerts a much stronger force when the soil is wet and thawed.
- B) The soil becomes much weaker when dry and frozen.
- C) The soil expands and contracts, lifting particles and dropping them a slight distance downslope.
- D) Eventually, these cause the soil and regolith to suddenly slide down the slope.

Answer: <https://biology-forums.com/index.php?topic=372964>

Question 10

Cepheid Variables are stars whose brightness varies in a predictable manner so that the absolute magnitude of the star can be determined, and this allows the _____ of the star to be determined.

- A) size
- B) direction of motion
- C) composition
- D) velocity
- E) distance from Earth

Answer: <https://biology-forums.com/index.php?topic=374540>

Question 11

X-rays have shorter wavelength than visible light; therefore, X-rays _____.

- A) cannot be detected because of their wavelength
- B) have lower energy than light waves
- C) are higher energy than light waves
- D) pass through materials because their photons are smaller than light photons

Answer: <https://biology-forums.com/index.php?topic=374467>

Question 12

Which of the following energy sources is thought to drive the lateral motions of Earth's lithospheric plates?

- A) swirling movements of the molten iron particles in the outer core
- B) heat transfer between the earth's interior and the surface of the earth
- C) gravitational attractive forces of the Sun and Moon
- D) electrical and magnetic fields localized in the inner core

Answer: <https://biology-forums.com/index.php?topic=372512>

Question 13

Why does magma viscosity vary with silica content?

- A) Increasing silica content lowers the melting temperature and since increasing the temperature of a magma decreases viscosity increasing silica content increases viscosity.
- B) There is no correlation between silica content and magma viscosity.
- C) Increasing silica content increases the amount of water a magma can dissolve and water decreases magma viscosity, so increasing silica content decreases magma viscosity.
- D) Increasing silica increases a tendency for silica bonds to link up in networks, acting like a polymerization of the magma.

Answer: <https://biology-forums.com/index.php?topic=373378>

Question 14

Earlier we discussed the concept of isostasy, where lower density rocks rise higher than higher density rocks. How is the variation of water depth at spreading centers (ridges) controlled by isostasy?

- A) Oceanic ridges are sites where the lithosphere is carried into the mantle on one side (aka subduction zones), and the volcanos along these margins produce the ridge by buildup of lower density crust.
- B) It has nothing to do with isostasy; the areas are simply high because there are chains of active volcanos along the ridge crest, producing the topography.
- C) The lithosphere cools as it moves away from the ridge axis by sea floor spreading, and cooler rocks are lower density, so the sea floor gets deeper as the lithosphere gets more dense.
- D) Volcanic rocks are lighter than other rocks, and so the abundant volcanic rocks at the ridges are lower density features that produce the seafloor topography.

Answer: <https://biology-forums.com/index.php?topic=373736>

Question 15

Why are there only 4-7 eclipses per year?

- A) The moon's orbit is inclined to the ecliptic and only crosses the ecliptic 3-4 times per year.
- B) The moon's orbit is inclined to the ecliptic and only crosses the ecliptic twice per year.
- C) There are only 4 full moons and 4 new moons per year, so no more than 4-7 are possible.
- D) There are more, they just aren't visible on both sides of the earth.

Answer: <https://biology-forums.com/index.php?topic=374369>

Question 16

The earth formed approximately _____ years ago.

- A) 5,000
- B) 11,000,000
- C) 4,600,000,000
- D) 13,700,000,000
- E) 33,200,000,000,000

Answer: <https://biology-forums.com/index.php?topic=373605>

Question 17

Several of the moons of Saturn, Uranus and Neptune display evidence of volcanic activity. What is the most common type of volcano on these moons?

- A) pyroclastic eruptions of rhyolitic silicate material
- B) basalt shield volcanos
- C) ice volcanos
- D) sulfur volcanos

Answer: <https://biology-forums.com/index.php?topic=374435>

Question 18

Which of the following is not part of the climate system?

- A) hydrosphere
- B) cryosphere
- C) gyrosphere
- D) geosphere
- E) biosphere

Answer: <https://biology-forums.com/index.php?topic=374229>

Question 19

At first quarter it is approximately _____ week(s) until the new moon.

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

Answer: <https://biology-forums.com/index.php?topic=374366>

Question 20

Downcutting (also known as rejuvenation) of a stream may be due to _____.

- A) a decreased gradient
- B) uplift of land
- C) rising of sea level
- D) thermal expansion

Answer: <https://biology-forums.com/index.php?topic=373090>