

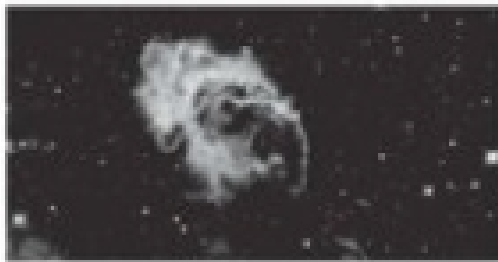
GLY 1000-02
Dynamic Earth

Study Guide for Midterm 1

Spring 2014

1. Aside from Earth, the terrestrial planets are
Mars, Mercury, and Venus
2. The gas giant, or Jovian, planets are
Jupiter, Saturn, Uranus, and Neptune
3. Our sun belongs to a galaxy known as
The Milky Way
4. Comets are primarily a mixture of
Ice and Dust
5. In 2006, The International Astronomical Union produced a major announcement concerning Pluto. Which was..
Pluto has been officially demoted from its former status as one of the nine major planets
6. An ancient greek philosopher concluded (correctly) that the
Earth was spherical (round)
7. Who first discovered four moons belonging to Jupiter, proving conclusively that some
bodies do not orbit around the Earth?
Galileo
8. An important contribution made by Copernicus is his (correct) assertion that the
Sun was the center of Earth's orbit
9. Which of the following is NOT true about the Kuiper Belt?
 - a. Gerald Kuiper predicted its existence in 1951
 - b. In 1992, Astronomers discovered millions of icy objects in this region, which is beyond Neptune
 - c. It contains an object called Eris, which is 20% larger than Pluto
 - ~~d. Pluto and Eris are now both considered planets~~
10. A _____ transmits energy from one point to another in the form of periodic motions and is defined by both the distance between this periodic motion (_____) and the number of them that pass a fixed point in a given time interval (_____)
Wave, Wavelength, Frequency
11. In agreement with the Big Bang Theory, our Universe is
Expanding

12. In our current understanding of the Big Bang,
The Universe is considerably older than the Earth
13. Researchers have determined that the Universe began expanding subsequent to the Big Bang. When did this event occur?
13.7 Ga ago
14. Strong evidence that the Universe is expanding comes from the fact that the light emitted from distant galaxies appears to be
Red shifted
15. Waves that are "blue shifted" have shorter wavelengths than those that are "red shifted"
true
16. Around 1929, Hubble and other astronomers discovered that the light of distant galaxies displayed red shifts relative to the light of nearby stars. This means that
- All distant galaxies are moving away from Earth at an immense velocity
 - These galaxies are moving away from a fixed light source
 - The whole Universe is expanding
 - A, B, and C are correct
 - A and C are correct**
17. First generation stars tend to be
large and hot
18. The Hubble Telescope took this photo in 2009 of an object 7,500 light years away.
What is it?



Nebulae

19. By far the most common elements in the Universe and in our solar system are
Hydrogen and Helium
20. Differentiation of the core from the mantle early in Earth's history was possible because the planet was _____ at the time
very hot
21. The metal alloy that makes up the core of Earth is _____, as compared to the rocky mantle.
u. denser

22. The shape of Earth's magnetic field is approximately that of a _____.
dipole (such as that produced by a bar magnet)
23. If one were to ride a hot air balloon up into the atmosphere, one would experience the concentration of gases _____.
becoming less dense
24. Leftovers from the protoplanetary disk that formed our Solar System after the Big Bang can be found where?
Oort cloud
25. As seismic (earthquake-generated) waves travel downward and reach the Moho, they _____.
speed up
26. An aurora (shown below) is produced when _____.



- solar wind particles are directed toward the poles and excite atmospheric gases
27. Which of the following is NOT true about comets and asteroids?
both are composed of rock and ice
28. Substances that can be transformed to a gas at relatively low temperatures are termed _____.
volatiles
29. Hydrocarbons, such as petroleum and natural gas, are classified as _____.
organic materials
30. Topographically, most of the ocean floor is made up of _____.
ocean plains (2.5–4.5 km below sea level)
31. Which of the following is most representative of Earth's hydrosphere?
surficial freshwater, the oceans, groundwater, and atmospheric water
32. In the whole Earth, the four most common elements are oxygen, silicon, magnesium, and _____.
iron