

## Astronomy Semester #1 Mid-Term Exam Review (Day 1)

1. What is a constellation? How many are there? How many can you see on a clear, dark night? To what magnitude?
2. Where would you be if Polaris was at your zenith?
3. Where on Earth can you observe all of the stars in the sky over an entire year?
4. What is the difference between solar and sidereal?
5. What is the ecliptic?
6. Who was Galileo and what did he see in his telescope?
7. Who were the Greeks that studied astronomy and what contribution did they make?
8. Who was Ptolemy and what was the Ptolemaic model?
9. What were the contributions of the following astronomers to what we now know today about the universe?
  - a. Copernicus
  - b. Tycho Brahe
  - c. Kepler
  - d. Newton
10. What is parallax? How does it determine distance?
11. What is EMR? How does the entire EMR spectrum break down? What spectrums penetrate the atmosphere the best? The worst?
12. What is the Doppler Effect? What does it allow us to measure?
13. What is spectroscopy?
14. What is the purpose of an astronomical telescope?
15. What is the difference between reflectors and refractors?
16. What is meant by the resolution and resolving power of a telescope?
17. What type of telescope is the Hubble?
18. Define and Understand the following terms:
  - a. Diffraction
  - b. Reflection
  - c. Refraction
  - d. Seeing

## Astronomy Semester #1 Mid-Term Exam Review (Day 2)

19. Identify the Terrestrial planets and the following characteristics: size, density, mass, orbit, and distance from sun.
20. Identify the Jovian planets and the following characteristics: size, density, mass, orbit, and distance from sun.
21. What is the difference between an asteroid and a meteorite? What are they made of? Where are they located?
22. What is the Kuiper Belt?
23. Describe and understand the various properties of the Earth. Including, but not limited to:
  - a. Identify the various levels of the Earth's structure. Where are they? What's in them?
  - b. How did the Earth's atmosphere develop over time? What type of gases were present as it developed and in what order?
  - c. Why is the sky blue?
  - d. What is so important about 23?
  - e. How did we determine the composition of the Earth's core? What is the difference between P and S waves?
24. Describe and understand the various properties of the moon. Including, but not limited to:
  - a. Various soil types, surface features, composition, and location. What are rilles?
  - b. Size, Density, Phases, Temperature and atmosphere.
  - c. Distance from the Earth – How do we know, exactly?
  - d. How does the orbital and rotational periods compare? What is meant by tidally locked?
  - e. What is the theory behind how the moon was created?
  - f. What were clementine and the Lunar Prospector? What do they think they found in the poles?
25. Describe and understand the various properties of the Mercury. Including, but not limited to:
  - a. Various soil types, surface features, composition, and location. What are scarps?
  - b. Size, Density, Phases, Temperature and atmosphere.
  - c. How far is it from the sun? Why does this make understanding it difficult?
  - d. How does the orbital and rotational periods compare? What is meant by a 3:2 resonance?
  - e. What is the theory behind how the moon was created?
  - f. What was Mariner 10? What do they think they found in the poles?