Study Guide—ES 104—Midterm Exam—Fall 2009—Karen Brown

VOCABULARY WORDS		
Big Bang	Inner planets	Photon
Asteroid	Jovian planets	Plane of the ecliptic
Astronomy	Kuiper belt	Planetary nebula
Atmosphere	Lithosphere	Precession
Aurora	Lunar eclipse	Ptolemaic system
Biosphere	Mantle	Radio telescope
Celestial sphere	Maria	Red giant
Chromosphere	Main sequence star	Reflecting telescope
Comet	Mean solar day	Refracting telescope
Core	Meteor	Retrograde motion
Corona	Meteor shower	Rotation
Crust	Meteorite	Sidereal day
Doppler effect	Meteoroid	Solar eclipse
Ecliptic	Nebula	Solar flare
Electromagnetic radiation	Nebular hypothesis	Solar wind
	Nova	Spicule
Fusion	Nuclear fusion	Sunspot
Geocentric	Orbit	Supernova
Granules	Orbital period	Synodic month
Heliocentric	Outer planets	Terrestrial planets
Hydrosphere	Phases of Moon	Theory
Hypothesis		White dwarf

Know the nebular hypothesis of the formation of Sun and the planets of our solar system: why and how the outer planets are different from the inner planets.

Know what is important about meteoroids and asteroids: where they are, come from, go to.

Know the contributions to astronomy of Ptolemy, Copernicus, Tycho Brahe, Galileo, Newton.

Understand the geometry of eclipses, waxing and waning Moon, phases of Moon, why only one side ever faces Earth.

What are the substances that planets composed of? How are the inner planets different in composition from the outer planets? Be able to contrast the terrestrial planets to the Jovian planets.

What is Moon like? What is it composed of, what are its major features, history of formation, features of craters. How were the maria formed?

Some notable features about each planet. For example:

- Mercury: does it have an atmosphere, moons?
- Venus: significance of its atmosphere, volcanoes, moons?
- Mars: does it have water, volcanoes, moons?
- Jupiter: atmosphere, nature of interior, relative size, major moons
- Saturn: what are the rings made of, Major moon. What space exploration vehicle is there now?
- Uranus: axis is sideways
- Neptune: winds 1000 km/hr
- Their solar system order.
- What features of Pluto exclude it from being a 'proper' planet?

Some notable features about moon of outer planets: Io, Titan, Triton. What is the probable origin of Mars' moons: Phobos and Deimos?

Structure and composition of a comet and its tails. Origin of comets.

Doppler effect on appearance of distance celestial objects. How does this support the 'Big Bang' theory?

Why is a reflection telescope preferred over refraction telescope? What is the difference of the two? What do radio telescopes observe? What is the name of a space telescope? What are its advantages?

What is the structure of Sun? What is it composed of? Know what the parts are composed of. Why does it release energy? What do we know about sun spots? Prominences? How are auroras on Earth formed by Sun?

What is the closest star? How far away is it? What is the closest galaxy? Are we moving toward it, or away? How do we know?

Be able to describe the life cycle of a medium sized star. Know the relative lifespans, colors, eventual remnants of small, medium and large stars. What does the color of a star tell us about it?

Remember to study the recommended review questions, and the in-class activities. Keys for in-class activities are available on moodle. Try the textbook website too: you can take on-line quizzes. You can have the site email me your scores. http://www.prenhall.com/tarbuck