

29:52 Exploration of the Solar System
Homework Assignment # 2
February 3, 2010

Note: Some of the questions require use of the SC1 star chart

1. Which bright star has the following coordinates, RA=18h40m, Dec=39 degrees?
 - (a) Arcturus
 - (b) Fomalhaut
 - (c) Capella
 - (d) Vega
 - (e) Rigel

2. All of the major planets are always found quite close to a line across the sky (more exactly, a great circle on the celestial sphere). What is the name of this line?

3. Which constellation is the Sun in right now?
 - (a) Scorpius
 - (b) Leo
 - (c) Ursa Major
 - (d) Capricornus
 - (e) Gemini

4. What time of day will you see the *waxing crescent* Moon low in the southwest?
 - (a) early evening
 - (b) midnight
 - (c) noon
 - (d) before dawn
 - (e) middle of afternoon

5. The bright star Canopus has coordinates RA=6h20m, Dec=-53d. Let's say you are at sea and measure its altitude angle at transit to be 10 degrees. What is your latitude?
 - (a) 10d
 - (b) 27d
 - (c) 42d
 - (d) 85
 - (e) 53d

6. The first test in this class will be March 3. What will be the coordinates of the Sun on that day?
- (a) RA=5h, Dec=35d
 - (b) RA=23h, Dec=-7d
 - (c) RA=18h, Dec=-23d
 - (d) RA=9h, Dec=0d
 - (e) RA=12h, Dec=10d
7. Here is one for which you will need to use *Starry Night* . Approximately what time will Saturn rise during the next week?
- (a) 5 PM
 - (b) 7 PM
 - (c) 11PM
 - (d) 2 AM
 - (e) 5 AM
8. A star or planet is at its highest altitude angle above the horizon when it crosses a certain line on the sky. What is the name for this line? **Hint:** Think which celestial coordinate system this line is defined in.