ASTR 503 Homework 1 : Stellarium activity

(Due Jan 29) Note: use this <u>shortcut list for Stellarium controls</u>

1. (1 pt) First, install Stellarium from <u>stellarium.org</u> - there are downloads for both Mac and PC (and Linux). Write here the version you installed (e.g. 0.10.6) : _____.
Does it start up as a fisheye view, or as a horizon view? _____

2. (3 pt) Notice the popouts at the left and at the bottom (they show up when you move your cursor over them)... The top one on the left sets your location. What is the default location? _____
Set your location (use the popout or function 6): Many locations can be set by typing in the name of your city in the Question box (to the right of the magnifying glass icon). Or select on the map. Or set the lat and long: for Houston, use -93 degrees longitude, and 30N latitude, or use your own GPS to set it more accurately. Check the box to "use as default", so the next time it knows where you are. Does it give you a bright sky or a dark sky? _____
(it should use your computer's clock to give it the time of day). If you are in daylight, select "A" to get rid of the atmosphere. Move the time forwards (by pressing "L" repeatedly, each time you press it goes faster, then "K" to return to sidereal time. To go backwards, press "J" repeatedly and then again K to stop. Stop when the Sun is in your field of view, facing south, around local noon. Turn on the Constellation art by pressing "R" and the constellation labels by pressing "V". What constellation is the Sun in right now?
_____

3. (1 pt) (still near noon) Now turn on the ecliptic line (hit the "comma" key). Which constellations are along the ecliptic near the Sun? _____ and _____ .
Which planets are near the Sun? _____
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4. (1 pt) Now let time advance until the evening, about 7:30 pm. Advance the date to Jan 28 (use = or - key) What direction is the Constellation of Orion ?_____ Turn on the Altitude/ Azimuth grid. What Alt/Az is Sirius? _____ alt and _____ azimuth. The six bright stars that are surrounding the Moon are the "winter Hexagon": Aldebaran, Capella, Pollux, Procyon, Sirius and Rigel

5. (1 pt) Hit "n" to turn on nebulas. List two nebulas (or other deep sky objects) will be visible in late January when we are observing: _____ _____.

6. (1 pt) How far away does Stellarium say Betelgeuse is? _____ What does it give for its apparent _____and absolute magnitude_____?

7. (1 pt) What does Stellarium say is the apparent _____ and absolute magnitude _____ for Rigel?

8. (1 pt) Set the time to your next birthday. What day is that? _____ What constellation is the Sun REALLY in on your birthday? _____ What is the closest planet to the Sun on that day? _____

Last updated 1/16/2018