Assignment 5

Please type your responses into a word document, and submit that on UNM Learn. Show your work for all questions. You can take scans/pictures of your work if you put them in the word document, but don't submit them as images. Be sure to number your responses 1, 2(a), etc. so I know which question you're answering. If you get stuck, post a question on the forums. Chances are you're not the only one!

1. *(20 points) List the three hypotheses for the creation of the following, explain why they are correct and incorrect, and explain the presently accepted theory.*

   (a) *Earth's Moon.*

   (b) *Earth's atmosphere.*

2. *(20 points) Earth, Venus, and Mars share some similarities.*

   (a) *Explain the runaway greenhouse effect and the runaway refrigerator effect.*

   (b) *How do these relate to Mars, Venus, Earth, and global warming?*

3. *(20 points) We've discussed the Doppler shift that occurs in the wavelengths of waves emitted from a source moving towards or away from us (see Ch 5 if you get stuck!).*

   (a) *Define redshift and blueshift.*

   (b) *Describe how we can send a wavelength and analyze its reflection off of a planet to tell whether it is moving towards or away from us.*

   (c) *How can you tell how fast the planet is moving (answer qualitatively)?*

   (d) *Describe how we can send a wavelength and analyze its reflection off of a planet to tell whether it is spinning.*

   (e) *How can you tell how fast the planet is rotating (answer qualitatively)?*

4. *(10 points) Visit https://mars.nasa.gov/programmissions/missions/future/ and elaborate briefly on a mission that will bring rocks back from Mars.*