Answer each question thoroughly and completely, providing examples where required. Answer the questions below in your Midterm exam. 1.Describe the process of perception as a series of steps, beginning with the environmental stimulus and culminating in the behavioral responses of perceiving, recognizing, and acting. 2.Because the long axons of neurons look like electrical wires, and both neurons and electrical wires conduct electricity, it is tempting to equate the two. Compare and contrast the functioning of axons and electrical wires in terms of their structure and the nature of the electrical signals they conduct. 3.What are the two answers (one "simple" and the other "profound") to the question, "Why is our perception of colors and details worse in dim illumination than in bright illumination?" 4.What is inference? Describe Hermann von Helmholtz’s Theory of Unconscious Inference. Compare and contrast the likeilhood principle with unconscious inference listing three similarities and three differences. 5. When you walk from outside, which is illuminated by sunlight, to inside, which is illuminated by "tungsten" illumination, your perception of colors remains fairly constant. But under some illuminations, such as street lights called "sodium vapor" lights that sometimes illuminate highways or parking lots, colors do seem to change. Why do you think color constancy would hold under some illuminations, but not others? 6.What is sensory adaptation? How does it occur within the various senses? What function does sensory adaptation serve? Provide a relevant example that illustrates your point. 7.What are the characteristics of the energy that we see as visible light? Provide an example illustrating how these characteristics are expressed when someone sees a rainbow. What types of things (situations and/or objects) can interfere with these characteristics? 8.How does the eye transduce light energy into a neural message? What is the blind spot in the eye and how does it impact the transduction of light energy? 9.How is visual information processed in the brain? What are some things (situations and/or objects) which can impede visual information being processed in the brain? Please include a relevant example to illustrate your answer. 10.List the five filtering techniques of visual attention. Identify two similarities and two differences for each of the filtering techniques. Lastly, provide an example for each filtering techniques.