17.5/20

1. We have many parallel processing pathways to lighten the load of information process and separate the information resulting in selectivity in neurons and pathways. It helps the physical load allowing multiple things to be processed simultaneously in a parallel circuit creating a shorter circuit and allows for faster processing rather than one sequential circuit. Later on the information is integrated and creates the vision perceived. There is still a lot about the parallel pathways is unknown or unclear including specific pathways to the LGN or V1. (361) 
   Answer not very compelling

2. Dorsal is the where pathway believed to focus on spatially where things are located. Ventral is the what pathway which was believed to be how the image was interpreted but now these pathways seem to be not as segregated. They both are likely to process the same visual information but process the information for different behavioral goals. With binocular disparity, there is evidence of this because the pathways are sensitive to opposing features rather than the two pathways to pull the information they like and process that separately. (367) 
   The ventral pathway is known as the "what" pathway -- for object recognition

3. If the person looks at a preferred stimulus there is an increase in activation of the cell and a decrease when it’s a non-preferred stimulus. This is seen in the experiment(296). The baseline is measured by looking at a neutral stimulus outside the receptive field. The suppression is seen as the non-preferred firing rate is below the neutral stimuli meaning there is a suppression in firing.

4. Narrowing tuning curves increases sensitivity because by narrowing the tuning curve there is a smaller range of cells activating but they fire more with the heightened sensitivity. The multiplicative increase of a neuron’s as whole by the same factor indicating a more information is received because of the increased firing rate. (297)

5. Attention modulation appears to increase higher up in the visual hierarchy because there is an accumulation of processed information from earlier in the process to choose from that makes up more context information.

6. Featural attention is modulation based on features like color or shape. If there a feature the neuron prefers regardless if it is in the spotlight of attention then the neuron would still fire. This challenges the spotlight of attention analogy because attention had been thought to be more spatially focused and modulated(296).

7. Multiplicative modulation occurs in earlier areas within the smaller receptive fields of neurons. As you move to the higher areas, the receptive fields become larger and they
pool over the smaller receptive fields taking away the multiplicative modulation transforming into a nonlinear modulation. Since the each neuron has its own multiplicative factor not all of them would have the same to keep that modulation as you move higher into the areas.