

3) Draw the receptive field of an ON-ganglion cell in the retina. Remember how a “receptive field” of a sensory neuron in the somatosensory system looks like (Unit 4). Now state the general definition of “receptive field of a sensory neuron”.

4) Name 5 basic classes of neurons in the retina. Which type of neurons in the retina is capable of firing an action potential?

5) Explain the difference between an ON- and an OFF-bipolar cell. Why does the ON bipolar cell depolarize with light, whereas the OFF bipolar cell hyperpolarizes with light?

6) Explain in a drawing how the retinal circuit (ON- and OFF- system with horizontal cells) enhances contrast.

7) Based on what you have learned about the retina, propose a mechanism through which the visual system can detect the edge of an object. You can make a drawing.