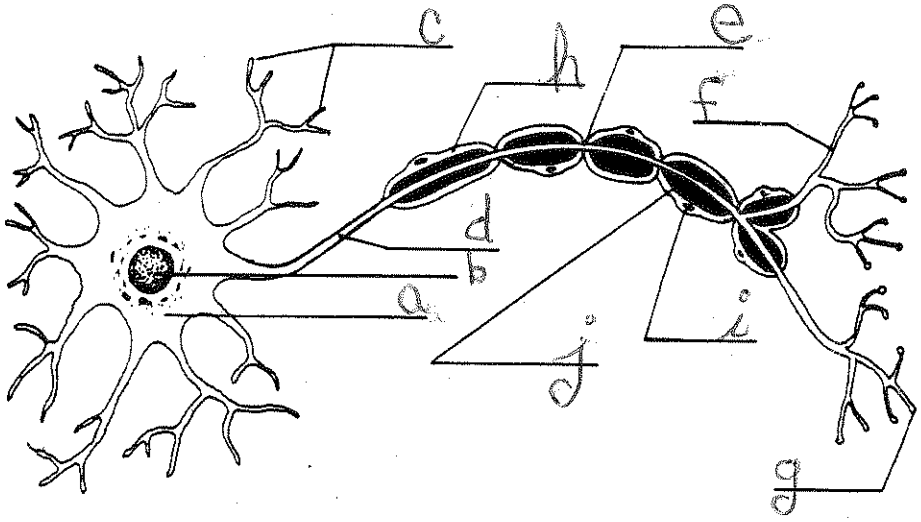
Block: Due:

NEURON AND NEUROMUSCULAR JUNCTION

Name _____



Neuron

Label the diagram at the left.

a. cell body (cyton)
b. nucleus
c. dendrites
d. axon
e. node of Ranvier
f. terminal branches
g. synaptic knobs
h. Schwann cell
i. Schwann cell nucleus
j. myelin sheath

Fill in the blanks with the correct answers.

Neurons are specialized for the transmission of nerve impulses. The nucleus is located in the cell body of the neuron. From the cell body, two types of structures carry out transmission functions. Dendrites transmit nerve impulses from other cells or sensory systems. Axons provide for the transmission of nerve impulses away from the cell body. A single neuron cell can be over a meter long due to the length of its axon (or dendrite). Schwann cells are the supporting cells associated with axons. They form a(an) myelin sheath around many vertebrate neurons. Nodes of Ranvier interrupt the myelin sheath were the axon is in direct contact with surrounding intercellular fluid. The junction between a neuron and a muscle is called a(an) synaptic junction. Acetylcholine is the neurotransmitter. At a neuromuscular junction, acetylcholine released from a(an) axon bulb depolarizes the muscle cell membrane and triggers muscle contractions.

Neuromuscular Junction

Label the following parts of a neuromuscular junction.

a. axon
b. cleft
c. synaptic knob
d. muscle fiber
e. acetylcholine sacs