**Outcome Practice: Neural Circuits**

**(Outcome 19)**

**Biology 12 Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

1. Give at least 3 examples of stimuli and their corresponding receptors.
2. Which of the below shows the order of structures involved in a neural circuit?
   1. Effector 🡪 motor neuron 🡪 interneuron 🡪 sensory neuron 🡪 receptor
   2. Effector 🡪 sensory neuron 🡪 motor neuron 🡪 interneuron 🡪 receptor
   3. Receptor 🡪 sensory neuron 🡪 interneuron 🡪 motor neuron 🡪 effector
   4. Receptor 🡪 motor neuron 🡪 sensory neuron 🡪 interneuron 🡪 effector
3. Using the diagram below, label each of the key parts of a neural circuit:

|  |  |  |  |
| --- | --- | --- | --- |
| sensory neuron | spinal cord (CNS) | message to brain | dendrite |
| receptor | interneuron | synapse | axon terminal |
| motor neuron | stimulus | effector |  |

Diagram

Description automatically generated

1. Explain why reflex arcs are an automatic behaviour?
2. Create a neural circuit diagram showing a person’s finger being pricked by a needle. Make sure to create a diagram that includes the receptor, 1 sensory neuron, 2 interneurons and 3 motor neurons and the response. Label the types of neurons, where the synapses are, a dendrite, a cell body, an axon, and an axon terminal as well as the direction of the impulse.