

NAME: \_\_\_\_\_ DATE: \_\_\_\_\_

THE NERVOUS SYSTEM

SECTION A

1. Complete the following sentences by writing the correct words on the lines provided. Not all words will be used.

<b>Skin</b>	<b>Sense</b>	<b>Reflex</b>	<b>Taste</b>	<b>Stimulus</b>	<b>Response</b>	<b>Synapse</b>
			<b>Effector</b>			

- a. The traffic light turns green, and the driver steps on the gas pedal to make the car move forward. The green traffic light acted as a(n) \_\_\_\_\_ that caused a response in the driver.
- b. In order for a nerve impulse to pass from an axon tip to the next structure, it must cross a space called a(n) \_\_\_\_\_.
- c. If you accidentally touch a hot pan, you immediately jerk your hand away without thinking, before you even feel pain. This type of response is known as a(n) \_\_\_\_\_.
- d. Each of the five specific \_\_\_\_\_ organ picks up a different kind of information about the environment.
- e. The \_\_\_\_\_ is the organ associated with the sense of touch.
- f. The flavor of food is influenced by the senses of smell and \_\_\_\_\_.

[6 mks]

2. a. Complete the following table with these drugs:

**ALCOHOL                      COCAINE                      HEROIN                      LSD**

(8 mks)

STIMULANTS	DEPRESSANTS	HALLUCINOGENS	OPIOIDS

- b. Match the type of drug with its description.

**DRUG**

Depressant

Opioid

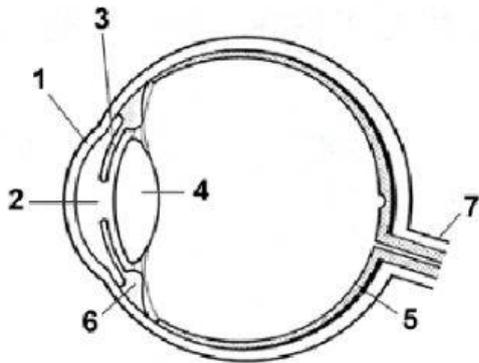
Stimulant

Hallucinogen

**DESCRIPTION**

- A drug that speeds up the nervous system.
- A drug that makes a person experience what is not there.
- A drug that slows down the nervous system.
- A drug that is a powerful painkiller.

- 1 Match the number of the part of the eye with the correct label. Type the number in the box beside the correct label.



**SECTION TWO.**

- Lens
- Cornea
- Retina

- Ciliary muscle
- Optic nerve
- Iris

[6 mks]

a. Write the number of the **parts** that bend light rays. \_\_\_\_\_ and \_\_\_\_\_ [2 mks]

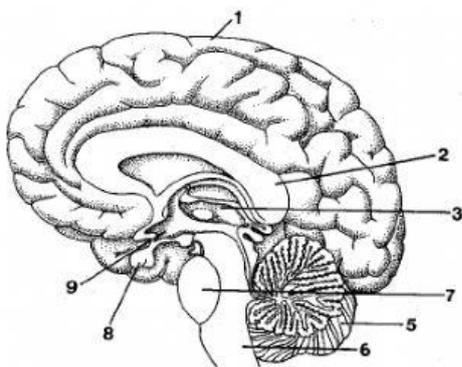
b. Write the number of the **parts** that change when the light gets brighter or dimmer. \_\_\_\_\_ and \_\_\_\_\_ [2 mks]

c. Write the number of the **parts** that change when looking at near or far objects. \_\_\_\_\_ ,and \_\_\_\_\_ [2 mks]

d. When the image forms on the retina of the eye, it is different from the actual object in three ways. Click on the features that describe how the image appears on the retina.

- |                                      |                                   |                                  |                                  |
|--------------------------------------|-----------------------------------|----------------------------------|----------------------------------|
| <input type="checkbox"/> UPSIDE DOWN | <input type="checkbox"/> DARKER   | <input type="checkbox"/> SMALLER | <input type="checkbox"/> HAZY    |
| <input type="checkbox"/> DISTORTED   | <input type="checkbox"/> INVERTED | <input type="checkbox"/> CROOKED | <input type="checkbox"/> [3 mks] |

- 2 Label the following parts of the brain as indicated by the lines to the right.



- Medulla Oblongata
- Cerebrum
- Hypothalamus

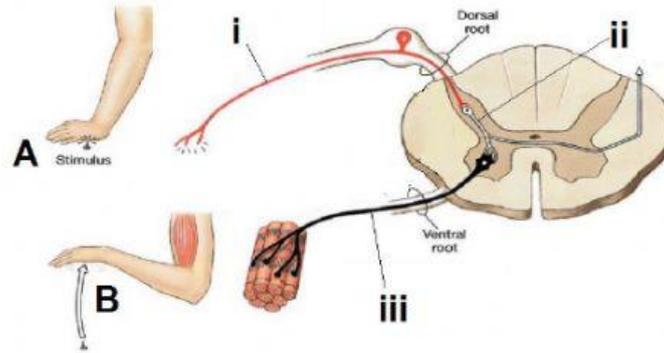
- Cerebellum
  - Pituitary gland
- [5 mks]

a. Which part of the brain is helping you to remember the correct answers for this test? \_\_\_\_\_ [1 mk]

b. Mila can no longer remember her name after an head injury. She probably damaged her \_\_\_\_\_ . [1 mk]

c. Sven cannot breathe, blink or swallow on his own after a head injury. He probably damaged his \_\_\_\_\_ . [1 mk]

3. The following diagram shows a diagram of a common happening of the human nervous system.



a. Is this a diagram of a reflex action or a reflex arc? \_\_\_\_\_ [1 mk]

b. What is happening at:

A \_\_\_\_\_ [1 mk]

B \_\_\_\_\_ [1 mk]

c. Write the names of the nerve cells labelled i, ii and iii. [3 mks]

i \_\_\_\_\_ ii \_\_\_\_\_ iii \_\_\_\_\_

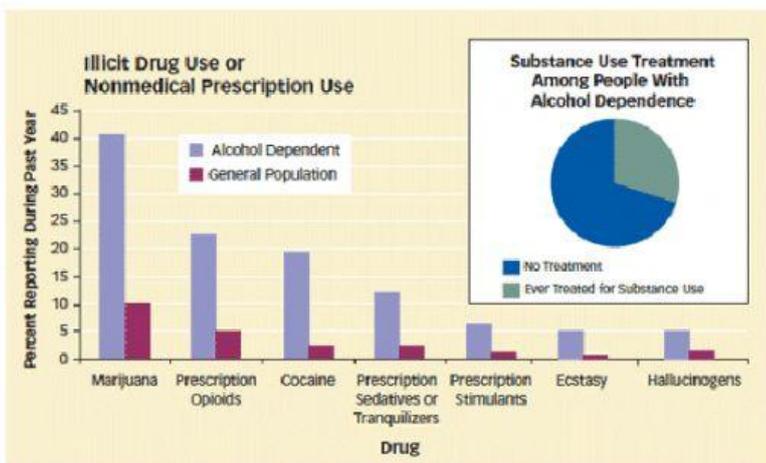
4. The following steps of the reflex arc are **NOT** in order.

- 1. axon of motor nerve                      2. sensory receptor in the skin                      3. cell body of motor neuron
- 4. interneuron                                      5. axon of sensory neuron                      6. skeletal muscles

Which response below places them in the correct order? [1 mk]

- A. 1, 3, 2, 4, 5, 6                      B. 6, 5, 4, 3, 1, 2                      C. 2, 5, 4, 3, 1, 6                      D. 2, 3, 6, 5, 1, 4

5. Look at the graph below and answer the following questions. [2 mks]



a. What percentage of respondents used marijuana but not alcohol during the past year?  
\_\_\_\_\_

b. What percentage of respondents used cocaine and alcohol during the past year?  
\_\_\_\_\_

## SECTION B

- A change or signal in the environment that can make an organism react is called a(n) \_\_\_\_\_.
  - stimulus.
  - reaction.
  - impulse.
  - response
- Suppose that you close a window because you notice that rain is falling. Your action in closing the window is a(n) \_\_\_\_\_.
  - involuntary reaction.
  - depressant.
  - stimulus.
  - response.
- Nearsightedness and farsightedness are caused by \_\_\_\_\_.
  - problem in the shape of the eyeball.
  - problem in the structure of the retina.
  - the inability of the iris to change size.
  - damage to receptor cells in the retina.
- What part of a neuron carries nerve impulses away from the cell body?
  - axon
  - synapse
  - dendrite
  - nucleus
- A motor neuron sends an impulse to \_\_\_\_\_.
  - a muscle or gland.
  - a sensory neuron.
  - an interneuron.
  - another motor neuron
- A synapse is the space between \_\_\_\_\_.
  - any two cells touching
  - the brain and spinal cord.
  - a dendrite and a cell body of two cells.
  - an receptor and effector.
- Pain is an important sensation, because it \_\_\_\_\_.
  - is unpleasant.
  - helps the immune system function.
  - can alert the body to danger.
  - is a depressant.
- The regions that make up the brain include the cerebrum, cerebellum, and \_\_\_\_\_.
  - senses.
  - medulla.
  - spinal cord.
  - retina.
- The brain and spinal cord make up the \_\_\_\_\_.
  - central nervous system.
  - peripheral nervous system.
  - somatic nervous system.
  - autonomic nervous system.
- Cone cells enable you to see \_\_\_\_\_.
  - colors.
  - black and white.
  - at night.
  - nearby objects
- Because of the way in which the lens of the eye bends light rays, which of the following is NOT a description of the image produced by the lens?
  - smaller
  - usually blurred
  - inverted
  - upside down
- The pupil of a person's eye is likely to become smaller when the \_\_\_\_\_.
  - object viewed is moving.
  - other eye is closed.
  - person moves from a dim room into bright sunlight.
  - person moves from bright sunlight into a dim room.
- Which part of the brain is responsible for controlling body temperature?
  - Cerebrum
  - Cerebellum
  - Medulla oblongata
  - Hypothalamus
- Which of the following is not a function of nerves in the skin?
  - Feel pain
  - Feel heat
  - Feel fear
  - Feel pressure

[14 mks]