

L1&2 Review - Nervous System



تم تحميل هذا الملف من موقع المناهج الإماراتية

موقع المناهج ⇨ المناهج الإماراتية ⇨ الصف التاسع المتقدم ⇨ علوم ⇨ الفصل الثالث ⇨ ملفات متنوعة ⇨ الملف

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المزيد من مادة
علوم:

إعداد: Elhddad Ahmed .Mr

التواصل الاجتماعي بحسب الصف التاسع المتقدم



صفحة المناهج
الإماراتية على
فيسبوك

الرياضيات

اللغة الانجليزية

اللغة العربية

التربية الاسلامية

المواد على تلغرام

المزيد من الملفات بحسب الصف التاسع المتقدم والمادة علوم في الفصل الثالث

مراحل نمو الإنسان قبل الولادة

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الجهاز الإخراجي

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درس العقاقير

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الوحدة 1 الجهاز العصبي: الدرس 3 الحواس

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ورقة عمل التكاثر الخلوي

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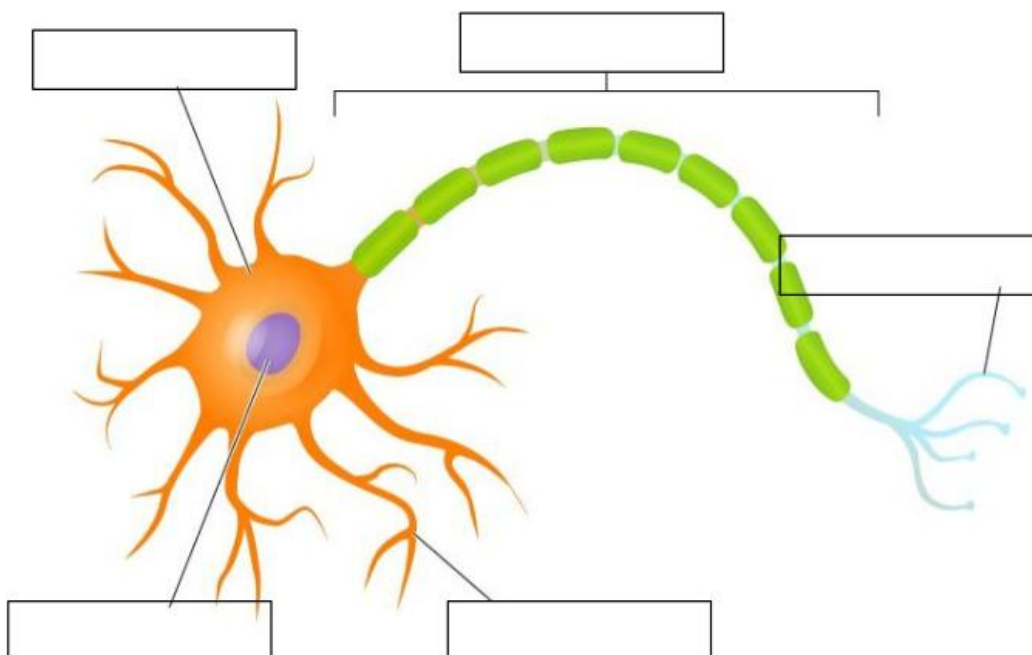
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• **Match each sentence with the appropriate term**

are specialized cells that help you gather information about your environment, interpret the information, and react to it.	Dendrites
receive signals called impulses from other neurons and conduct the impulses to the cell body.	axon
The nucleus of the neurons and many of the cell organelles are found in the	Neurons
carries the nerve impulse from the cell body to other neurons and muscles.	reflex arc
is a nerve pathway that consists of a sensory neuron, an interneuron, and a motor neuron.	threshold
The minimum stimulus to cause an action potential to be produced is a	cell body
is a chemical that diffuses across a synapse and binds to receptors on the dendrite of a neighboring neuron.	neurotransmitter

1) Place the labels on the correct structures of the neuron

- Axon
- Cell body
- Nucleus
- Dendrite
- Axon endings



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4) Which is the correct path that a nerve impulse will follow in a reflex arc?

- ☐ motor neuron → sensory neuron → interneuron
- ☐ sensory neuron → interneuron → motor neuron
- ☐ motor neuron → interneuron → sensory neuron
- ☐ interneuron → motor neuron → sensory neuron

5) Which is the result of the actions of the sodium-potassium pump?

- ☐ positive charge inside a neuron
- ☐ no charge outside the neuron
- ☐ negative charge inside a neuron
- ☐ no charge inside the neuron

6) Why is myelin important in sensing different kinds of pain?

- ☐ decreases speed of nerve impulses
- ☐ increases speed of nerve impulses
- ☐ prevents all nerve impulses
- ☐ prevents nerve impulses from jumping between nodes

7) Which of the following descriptions is correct regarding synapses?

- ☐ action potential causes dendrite release
- ☐ action potential causes neurotransmitter release
- ☐ synapse travels through a neurotransmitter
- ☐ muscle contraction produces neurotransmitters

8) What are the gaps on the myelin sheath called?

- ☐ cell bodies
- ☐ axons
- ☐ thresholds
- ☐ nodes

9) What happens when an action potential is produced with a signal that is stronger than threshold?

- ☐ weaker action potential generated
- ☐ action potential has same strength as threshold
- ☐ no action potential generated
- ☐ stronger action potential generated

10) What would be the hypothetical result if a person lacked motor neurons?

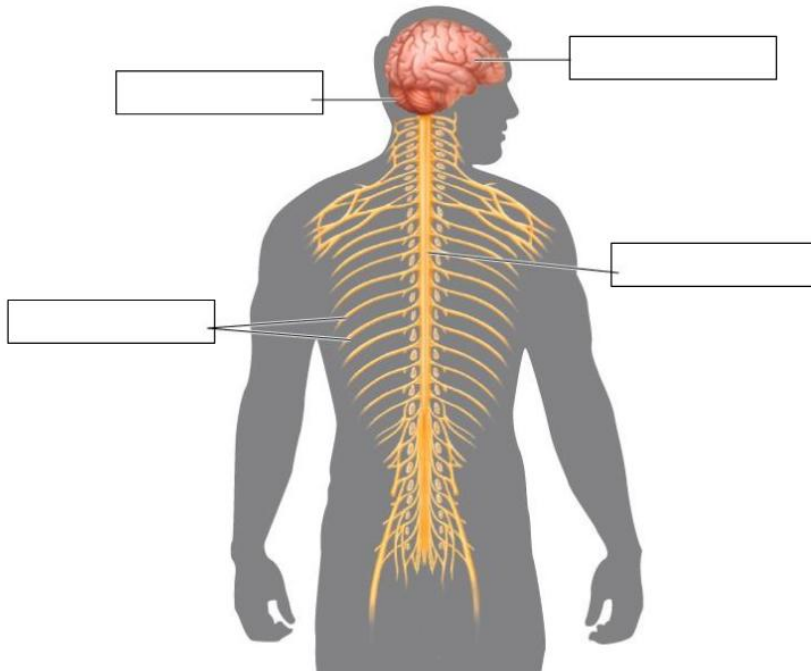
- ☐ would be unable to breath
- ☐ would be unable to feel a hot plate
- ☐ would be unable to swing hammer
- ☐ would be unable to feel a deep cut

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11) Fill in the blanks using the available answer choices.

A(n) _____ carries nerve impulses from the cell body to other neurons and muscles.
(Blank 1)

12) Place the labels on the correct structure of the nervous system.



13) Categorize the following descriptions as either the *somatic nervous system* or the *autonomic nervous system*. NOTE: Some answers may be used in both the somatic nervous system and the autonomic nervous system.

Somatic nervous system	Autonomic nervous system

Answer Bank
Peripheral nervous system Typically involuntary Typically voluntary Communicates sensory information to the brain and instructions from the brain to the skeletal muscles Carries impulses from the brain to the internal organs and glands

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14) Fill in the blanks using the available answer choices.

The _____ (Blank 1) nervous system is most active in times of emergency or stress, when the heart rate and breathing rate increase. The _____ (Blank 2) nervous system is most active when the body is relaxed.

15) The ____nervous system carries impulses from the central nervous system to the heart and other organs.

- ☐ autonomic
- ☐ cerebral
- ☐ somatic
- ☐ muscular

16) What is the large brain structure just below the skull?



- ☐ pons
- ☐ medulla oblongata
- ☐ hypothalamus
- ☐ cerebrum

17) What could cause a person with brain cancer to have lost balance and decreased coordination?

- ☐ cancer has damaged cerebellum
- ☐ cancer has damaged pons
- ☐ cancer has damaged hypothalamus
- ☐ cancer has damaged pons and hypothalamus

18) All reflex signals must go to the brain.

- ☐ True
- ☐ False

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19) Fill in the blanks using the available answer choices.

The _____ (Blank 1) regulates body temperature, thirst, appetite, and water balance.

20) _____ are sensory receptors found on the human tongue.

- ☐ Choroids
- ☐ Taste buds
- ☐ Neurons
- ☐ Olfactory nerves

22) Pain receptors are found in all body tissues except for those in the brain.

- ☐ True
- ☐ False

27) Fill in the blanks using the available answer choices.

Chemical fumes that influence the nervous system are called _____ (Blank 1).

29) Which would be the effect of a malfunctioning neurotransmitter?

- ☐ A nerve impulse would be stopped in the spinal column.
- ☐ An impulse could not cross the gap between neurons.
- ☐ A nerve impulse would be stopped in the brain.
- ☐ An impulse could not move along the axon of a neuron.

30) Which directly controls a person's decision to use the bicep muscles to lift a barbell?

- ☐ parasympathetic nervous system
- ☐ somatic nervous system
- ☐ central nervous system
- ☐ autonomic nervous system

31) Which is caused by the sympathetic nervous system?

- ☐ contracted bronchial muscle
- ☐ slowed heart rate
- ☐ dilated pupil
- ☐ increased intestinal secretions

37) Chemical receptors that detect the saltiness of potato chips are called _____.

34) Fill in the blanks using the available answer choices.

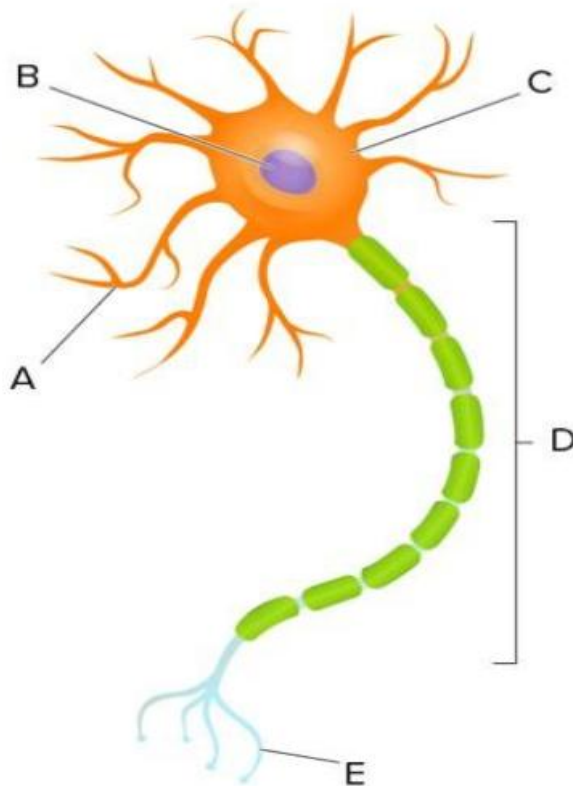
The spinal column is part of a major division of the nervous system called the _____ (Blank 1) nervous system.

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35) The gap between a sensory neuron and an interneuron is called a(n) _____.

36) A bundle of axons is called a(n) _____.

40) Match the neuron structures labeled A-E to the correct term.



- | | | |
|---|-------|--------------|
| A | _____ | nucleus |
| B | _____ | axon endings |
| C | _____ | cell body |
| D | _____ | axon |
| E | _____ | dendrite |

42) Which of the following is another name for a nerve impulse?

- ☐ node
- ☐ action potential
- ☐ threshold
- ☐ reflex arc

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44) Fill in the blanks using the available answer choices.

Indicate which division of the autonomic nervous system carries out the following functions.

Function	Division
controls organs and is most active during emergencies or stress	_____ (Blank 1)
controls organs and is most active when the body is at rest	_____ (Blank 2)

45) Fill in the blanks using the available answer choices.

Match the following statement to the correct terms.

Statement	Term
This neuron structure receives impulses from other neurons and transmits them to the cell body.	_____ (Blank 1)
This neuron structure transmits nerve impulses from the cell body to other neurons and muscles.	_____ (Blank 2)
This structure consists of the neuron's nucleus and many of the cell organelles.	_____ (Blank 3)

47) Fill in the blanks using the available answer choices.

Nerves in the _____ relay information from

(Blank 1)

external sensory receptors to the central nervous system.

The _____ carries impulses from the central

(Blank 2)

nervous system to the heart and other internal organs.

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46) Fill in the blanks using the available answer choices.

Match the following statement to the correct terms.

Statement	Term
Relays signals between the cerebrum and cerebellum	_____ (Blank 1)
Relays signals between the brain and the spinal cord	_____ (Blank 2)
Regulates body temperature, thirst, appetite, and water balance	_____ (Blank 3)
The largest part of the brain and is divided into two halves called hemispheres	_____ (Blank 4)

48) Identify the following descriptions as either the central nervous system or the peripheral nervous system.

	Central nervous system	Peripheral nervous system
Consists of sensory and motor neurons	☐	☐
Coordinates all of the body's activities	☐	☐
Consists of the brain and spinal cord	☐	☐
Transmits information to and from the brain and spinal cord	☐	☐

49) Specialized cells that help you gather information about your environment, interpret the information, and react to it are called _____.

51) The minimum stimulus to cause an action potential to be produced is a _____.

53) Match each term to the description that it best fits.

neurotransmitter

node

synapse

gap between one neuron's axon and another neuron's dendrite

a chemical that diffuses across a synapse then binds to receptors of the dendrite of a neighboring neuron

gap in the myelin sheath along the length of an axon

54) A reflex arc is a nerve pathway that consists of a sensory neuron, an interneuron, and a motor neuron.

☐ True

☐ False

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specialized cell that helps you gather, interpret, and react to information about your environment

region of a neuron that receives impulses from other neurons and conducts them to the cell body

contains the nucleus of a neuron and many of the cell organelles

region of a neuron that carries the nerve impulse from the cell body to other neurons and muscles

nerve pathway that consists of a sensory neuron, an interneuron, and a motor neuron; the basic structure of the nervous system

nerve impulse

minimum stimulus to cause an action potential to be produced

gap in the myelin sheath along the length of an axon

small gap between the axon of one neuron and the dendrite of another neuron

chemical that diffuses across a synapse and binds to receptors on the dendrite of a neighboring cell

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Sequence the steps in how a nerve impulse moves from one neuron to another neuron, by writing the numbers 1 to 5 in the squares to the left of the steps.

The neurotransmitter moves across the synapse and binds to receptors on the dendrite of a neighboring neuron.

An electrical impulse is sent along an axon, jumping from node to node in axons covered with myelin.

The neuron is at rest, with more sodium ions outside the cell and more potassium ions inside the cell.

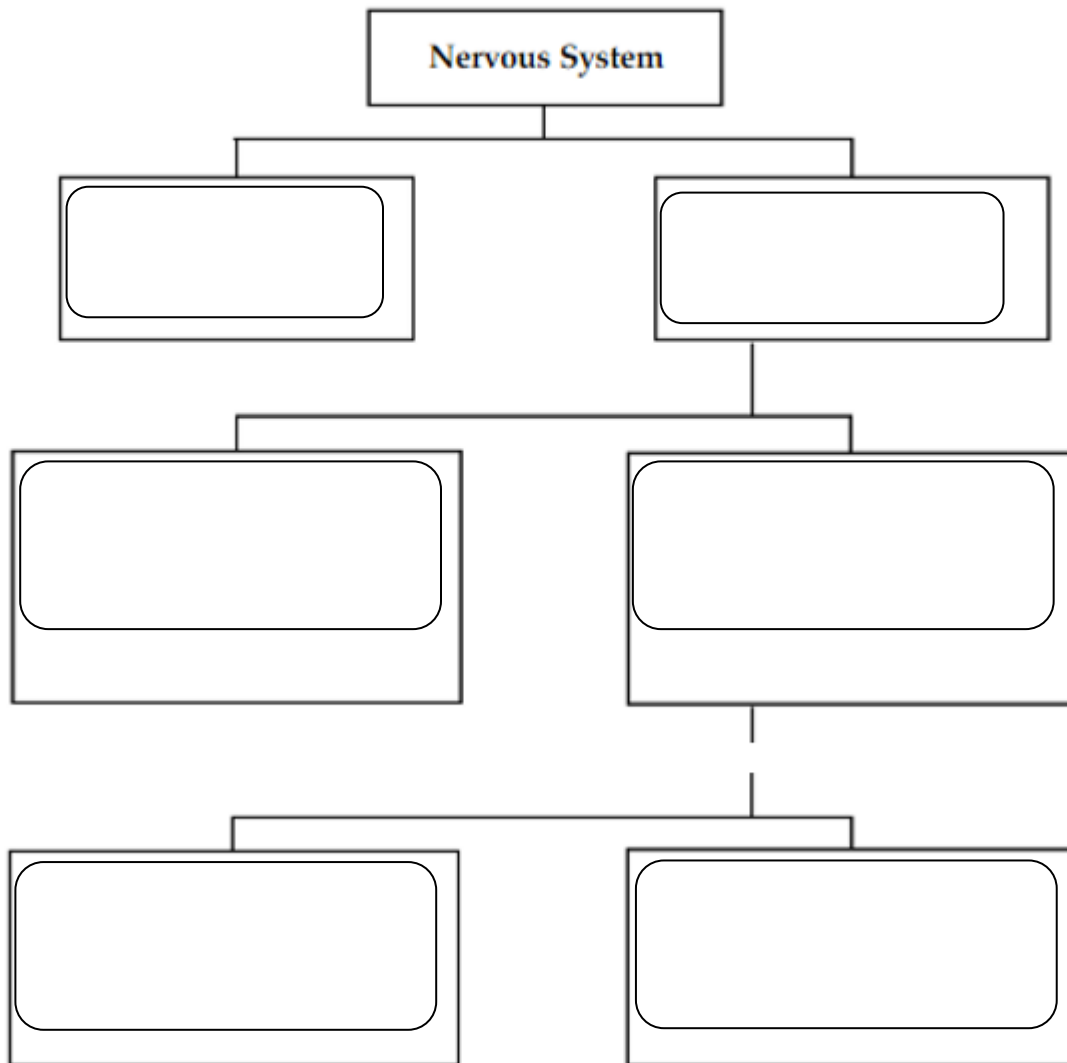
The impulse reaches the synapse, where channels again open. Vesicles fuse with the plasma membrane and release a neurotransmitter by exocytosis.

The threshold for an action potential is reached at a dendrite, opening channels in the plasma membrane, so sodium ions flow into the cell through these channels causing a reversal in electrical charge.

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Organize and summarize *each division of the nervous system and its function.*

- autonomic
- peripheral
- central
- somatic
- parasympathetic
- sympathetic



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