

Explain

Page	Study Inquiry
54	1) MRI, CAT & PET scans
54	2) EEG An EEG or Electroencephalogram is an amplified reading of brain waves. By presenting a stimulus to a test subject the EEG can identify the electrical wave evoked by the stimulus by having a computer filter out any unrelated electrical activity.
63	3) Aphasia: what and where Aphasia is an impaired use of language as a result of damage to a cortical area. If the Broca's area is damaged, it is difficult to form words. The Broca's area is located towards the front of the brain. If the Wernicke's area is damaged, people can speak, but only in a meaningless way. The Wernicke's area is located towards the mid brain. If the angular gyrus is damaged, the brain cannot read. The angular gyrus is located towards the back of the brain.
46	4) opiate receptors Opiate receptors are a lock within the body that is accessed only by naturally occurring opiates. These opiates are named Endorphins, and are the body's natural key to unlock the opiate receptors, allowing the body to feel the effects of the released endorphins
46	5) Endorphins relationship neurotransmitters
42-3	6) axons vs. dendrites The dendrites receive information and conduct impulses towards the cell body. The axon passes the information along to other neurons or to muscles or glands. Dendrites are short, unlike axons that may be short or long.
51	7) neuron networks function with the brain
51-52	8) the endocrine's relationship to hormones The endocrine system is a critical communication center of the body, and is interconnected with the nervous system. The endocrine system's glands secrete hormones, which are chemical messengers that are produced in one tissue and travel through the bloodstream and affect other tissues, including the brain.
51	9) hormones vs. neurotransmitters Hormones are chemicals released by the endocrine system's organs into the blood or surrounding tissue that then travel to affect another type of tissue. The main endocrine gland is in the brain, the pituitary, which is involved in growth. Hormones are slower acting than other signals the body uses and its effects tend to linger. Neurotransmitters are chemicals active in the synaptic cleft released by one neuron's axon into the synaptic cleft to then bind with a receptor cite in another neuron, muscle, tissue, etc that then continues the impulse to another neuron or

	the action potential moves into the tissue and it responds in an appropriate way.
5757	10) cerebellum: provide example of when healthy vs. injured The cerebellum, or the little brain, influences learning and memory but mainly controls voluntary movement. You use the cerebellum with no conscious effort. These are the functions of a healthy cerebellum, if you were to injure your cerebellum you may experience difficulty walking, keeping your balance, or shaking someone's hand. Also your movements may be jerky and exaggerated.
57	11) what is behavior or emotions are linked to the Limbic System
57	12) what might happen if there was a lesion to the Amygdala Creating a lesion in the amygdala could cause a docile person to become excessively aggressive and placing the lesion a small measure over could pacify the person. The amygdala controls primitive rage much like road rage and to create lesions would be to provoke or subdue those feelings
57	13) what happens if the hippocampus is lost to injury The hippocampus is a part of the limbic system that processes memory. When humans or animals lose their hippocampus due to surgery or injury, they become unable to lay down new memories of facts and experiences. So, once it is injured, a person will be able to recollect something from before the hippocampus was injured, but all of their new experiences will not be remembered.
58	14) what part of the Limbic System says feed me The hypothalamus is the part of the limbic system that influences hunger. It can be found on page 58 in the textbook. The hypothalamus monitors blood chemistry and takes orders from other parts of the brain (such as in the cortexes), but this is used mostly for the secretion of hormones instead of hunger.
48-51	15) central vs. peripheral nervous system Central: It is formed of the brain and spinal cord. It enables our humanity: thinking, feeling, and acting. The Central Nervous System sends instructions out to the body's tissues. The spinal cord is an information highway connecting the Peripheral Nervous System to the brain Peripheral: It links the Central Nervous System with the body's sense receptors, muscles, and glands. It has two components: skeletal and autonomic. With its sensory neurons, it carries messages to the Central Nervous System from the body's sense receptors, its motor neurons carry messages from the Central Nervous System to the muscles and glands
62	16) what is meant by association areas The association areas, which are the gray areas, integrate information. They associate various sensory inputs with stored memories, which is an important

	part of thinking. It is responsible for integrating and acting on information received and processed by sensory areas. The association area takes up the majority of the space in the brain. The association area is the uncommitted area of the cortex
62	17) the connection between association areas and the frontal lobe
41	18) what would Franz Gall like about your head Franz Gall would like my head if it had bumps in the correct places. This was called phrenology. It could predict my mental abilities, and character traits. He was master Phrenologist.
55-6	19) what parts of my brain system might be affected if the following happened: as I am resting, a pretty girl walks by. I am aroused and my heartbeat increases. The visual attractiveness would be acknowledged through the occipital lobe. (p. 60) The reticular formation would control arousal, after receiving the input from the thalamus. (p.56) This could cause the limbic system to secrete hormones due to the arousal. (p. 57) The increased heartbeat will be controlled by the Medulla. (p. 56) The possible conversation will be instigated by Broca's area. (p. 63
57	20) where is the little brain is and its functions The "little brain" is the cerebellum, which coordinates voluntary movement and balance, and influences learning and memory. Injury to the cerebellum causes difficulty walking and problems with balance. The cerebellum, which looks like two wrinkled hemispheres, hangs at the back of the brain and is located by the spinal cord
58	21) what thinking about sex might stimulate [think neuro!] Thinking about sex in the cerebral cortex can stimulate the hypothalamus to tell the Pituitary Gland to secrete hormones. Then these hormones influence the master gland, the pituitary, which influence hormone release by other glands monitored by the hypothalamus. The hypothalamus is also in control of hunger, regulates thirst, body temperature.
63-4	22) the four clues that led to the solving some of the mysteries of language
52	23) why neurotransmitters and hormones are called 'chemical twins
43	24) describe the parts of the motor neuron and explain the parts functions Each neuron consists of a cell body and its branching fibers. The motor neurons consist of the dendrites, cell body, axon, myelin sheath, neural impulse, and the terminal branches of axon. The dendrites receive information, the axon passes the information to other neurons or to muscles or glands. Myelin sheath is a layer of fatty cells, it insulates the axons of some neurons and helps speed their impulses. When a neuron fires an impulse when stimulated by pressure, heat, light, or chemical messages from adjacent neurons, which is called action potential
46	25) acetylcholine

46	26) when endorphins are released Endorphins are released during times of pain and vigorous exercise. These are responsible for such feelings as a runner's high, the pain-killing effects of acupuncture, and the indifference of pain in some people with injuries

47	<p>27) Parkinson's disease</p> <p>Endorphins are released during times of pain and vigorous exercise. These are responsible for such feelings as a runner's high, the pain-killing effects of acupuncture, and the indifference of pain in some people with injuries</p>
56	<p>28) the purpose of the thalamus</p> <p>The thalamus is the brain's sensory switchboard. It receives information from the sensory neurons and routes it to the higher brain regions which deal with four of the five senses: hearing, tasting, seeing, and touching The thalamus receives some of the higher brain's replies, and directs it to the cerebellum and medulla</p>
59-60	<p>29) describe the parts and position of the cerebral cortex</p> <p>The Cerebral Cortex is the thin surface layer of the cerebral hemispheres, about a 1/8- inch sheet of cells composed of about 30 billion nerve cells. It has a wrinkled appearance, which has four regions or lobes. The Frontal Lobe is located behind your forehead. The parietal lobes are at the top and to the rear. The Occipital Lobes is located at the back of your head, and the Temporal Lobes are just above your ears. The Motor Cortex runs from the ear to ear across the brain parallel to the Motor Cortex is the Sensory Cortex and is known as the "headband"</p>
64	<p>30) describe, in order, the what happens when we read aloud</p> <p>First, words register in the visual area. The words are then relayed to the angular gyrus, which transforms the words into an auditory code. The auditory code is then received and understood in Wernicke's area, then sent to Broca's area which controls the motor cortex, which then creates the word</p>
65	<p>31) what is cut when we split the brain</p> <p>When we split the brain the Corpus Callosum is cut. The corpus is a wide band of axon fibers that connect the two cerebral hemispheres.</p>
68	<p>32) some characteristics of left-handedness</p>
70	<p>33) some characteristics of left brain vs. right brain</p>
52	<p>34) the function and products of the adrenal gland</p>