MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

1) Twins that develop from two separate fertilized ova and are therefore different in genetic make-up are ______ twins.
   A) fraternal     B) Siamese     C) identical     D) symbiotic

2) Research studies carried out on children, adopted at birth by parents not related to them, to determine the relative influence of heredity and environment on human behavior are called ______ studies.
   A) strain     B) adoption     C) selection     D) case

3) Which of the following have the MOST similar genetic composition?
   A) identical twins     B) fraternal twins     C) cousins     D) siblings

4) Fraternal twins are ______ similar genetically than are other brothers and sisters.
   A) no more     B) much more     C) slightly more     D) much less

5) Each of the following is true of family study research designs in behavior genetics EXCEPT they ______.
   A) are designed for human research
   B) assume a greater similarity of a trait among close relatives as opposed to distant relatives
   C) make it possible to rule out the role of the environment

6) Studies that estimate the heritability of a trait by breeding animals with other animals that have the same trait are called ______ studies.
   A) twin     B) family     C) strain     D) selection

7) Todd’s identical twin brother suffers from schizophrenia. The odds are one out of ______ that he, too, will develop this mental illness.
   A) two     B) eight     C) six     D) four

8) Studies of heritability in humans that assume that if genes influence a certain trait, close relatives should be more similar with that trait than distant relatives are called ______ studies.
   A) family     B) strain     C) selection     D) twin

9) Strain studies involve ______.
   A) a single generation of animals
   B) adopting children with similar traits
   C) inbreeding of close relatives of animals over several generations

Name___________________________________
Period________
Date_________
10) Todd's fraternal twin brother suffers from schizophrenia. The odds are _______ percent that he, too, will develop this mental illness.
   A) 50  B) 15  C) 100  D) 25

11) Prenatal screening techniques such as amniocentesis detect genetic problems in _______ percent of pregnancies.
   A) about 10  B) less than 1  C) about 2  D) about 5

12) Human beings have _______ pairs of chromosomes
   A) 23  B) 12  C) 17  D) 45

13) Human beings have _______ pairs of chromosomes in every normal cell.
   A) 46  B) 23  C) 12  D) 17

14) At fertilization, the chromosomes from the father's sperm unite with the chromosomes from the mother's egg, creating a new cell called a(n) _______.
   A) genome  B) blastocyst  C) zygote  D) embryo

15) A zygote contains _______ chromosomes in normal circumstances.
   A) 36  B) 46  C) 23  D) 13

16) Each of the following statements about differences in hemispheric functioning is true EXCEPT _______.
    A) differences in the hemispheres appear to be greater in women than in men
    B) normally, the two hemispheres communicate with each other and work together in an integrated, coordinated way
    C) not everyone shows the same pattern of difference in functioning between the left and right hemispheres

17) Simply put, Broca's area is important for _______, and Wernicke's area is important for _______.
    A) talking; listening  B) talking; talking  C) listening; talking

18) Left-handedness appears to be the result of _______.
    A) exclusively prenatal influences
    B) exclusively environmental influences
    C) a combination of genetic, environmental, and prenatal influences
    D) exclusively genetic influences

19) Language difficulties that often result from strokes or other brain injuries are called _______.
    A) aphasias  B) anosmias  C) hematomas  D) occlusions

SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

20) The ribbon-like band that connects the two hemispheres of the brain is called the _______.
MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

21) Males are _______ likely than females to be left-handed.
   A) slightly less  B) much less  C) slightly more  D) much more

22) “Split brain” patients are patients who have had _______.
   A) their corpus callosum cut  B) a prefrontal lobotomy
   C) their brain stem cut down the middle  D) their cerebellum split in the middle

23) A baby is born with an impairment in her right cerebral hemisphere, but it is not discovered until years later, when certain clues are pieced together. Which of the following is LEAST likely to be one of those clues?
   A) She has severe language problems.
   B) She has trouble picking up objects with her left hand.
   C) She has trouble understanding the meaning of a story that is read to her.

24) Which hemisphere of the cerebral cortex is usually dominant in spatial tasks?
   A) the left hemisphere  B) the front hemisphere  C) the right hemisphere

25) Amy has suffered damage to Broca’s area in her brain. She is most likely to exhibit _______ aphasia.
   A) receptive  B) expressive  C) inclusive

26) A baby is born with an impairment of his left cerebral hemisphere, but it is not discovered until years later, when certain clues are pieced together. Which of the following is MOST likely to be one of those clues?
   A) He has difficulty perceiving concepts and spatial relationships.
   B) He has difficulty recognizing people’s faces.
   C) He has difficulty learning to read.

TRUE/FALSE. Write ‘T’ if the statement is true and ‘F’ if the statement is false.

27) Even left-handers tend to have their language functions controlled by the left hemisphere of the brain.

28) Differences between hemispheres are greater in women than in men.

29) Broca’s area is important in listening and Wernicke’s area is important in talking.

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

30) A patient suffering from a seizure disorder has his right hemisphere anesthetized. Which of the following is he MOST likely to do?
   A) laugh and express positive emotions  B) fall into a deep sleep

31) People tend to be more easily stressed, frightened, and depressed when the _______ hemisphere of their brain is more active than the _______ hemisphere of their brain.
   A) front; rear  B) rear; front  C) right; left  D) left; right
SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

32) The hemisphere of the brain most dominant in verbal tasks is the _____ hemisphere. 32) ____________

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

33) In regards to the brain, the term “plasticity” refers to _______. 33) ______
   A) ability to adapt to new conditions
   B) level of complexity
   C) easily broken or “cracked”
   D) brittleness, or rigidity

34) The ability of the brain to change in response to experience is called _______. 34) ______
   A) neural plasticity
   B) reticular formation
   C) neurogenesis
   D) neural plasmosis

35) Axons
   A) are primarily responsible for the hypothalamic functions of regulation and motivation of sexual functions.
   B) are contained within the cell nucleus.
   C) may be up to a quarter of a mile long.
   D) carry messages away from a cell body.

36) The three parts of every neuron are:
   A) myelin; glia; cell body. 36) ______
   B) glia; dendrite; axon.
   C) myelin; cell body; dendrite.
   D) dendrite; cell body; axon.

37) The human brain contains somewhere between _______ and _______ neurons. 37) ______
   A) 2 trillion; 5 trillion
   B) 10 billion; 100 billion
   C) 10 million; 20 million
   D) 50 million; 100 million

38) Within a neuron, information always flows from _______. 38) ______
   A) cell body to axon to dendrite
   B) axon to cell body to dendrite
   C) dendrite to cell body to axon
   D) cell body to dendrite to axon

39) The cell which underlies the activity of the entire nervous system is the _______. 39) ______
   A) glial cell
   B) epidermal cell
   C) neuron
   D) T-cell

40) The short fibers which extend from the cell body, allowing it to receive messages from other neurons are _______. 40) ______
   A) synapses
   B) dendrites
   C) nerve bundles
   D) axons

41) A nerve is a group of _______ bundled together. 41) ______
   A) dendrites
   B) interneurons
   C) glial cells
   D) axons
42) A nerve is composed of ________.  
A) elongated glial cells  
B) a neuron and its synapses  
C) a bundle of axons  
D) a bundle of synapses  

43) Neurons that carry messages from the spinal cord or the brain to the muscles and glands are called ________ neurons.  
A) primary  
B) afferent  
C) efferent  
D) association  

44) A procedure in which some of the cells that the fetus casts off into the fluid surrounding it in the womb are collected and tested for chromosomal or genetic defects is ________.  
A) amniocentesis  
B) intra-uterine probe testing  
C) chorionic villus sampling  

45) A procedure in which cells are collected from the membranes surrounding the fetus, then are tested for genetic abnormalities, is called ________.  
A) amniocentesis  
B) ultrasound  
C) chorionic villus sampling  

46) Incoming messages are combined into meaningful impressions in the ________ areas.  
A) motor projection  
B) association  
C) sensory projection  
D) convolution  

47) The ________ lobe accounts for about one-half the volume of the human brain.  
A) parietal  
B) occipital  
C) temporal  
D) frontal  

48) The part of the hindbrain sometimes called the “little brain” is the ________.  
A) cerebrum  
B) limbic system  
C) medulla  
D) cerebellum  

49) The cerebral cortex accounts for about ________ percent of the weight of the human brain.  
A) 20  
B) 60  
C) 40  
D) 80  

50) The most recent part of the nervous system to evolve is the ________.  
A) midbrain  
B) cerebral cortex  
C) limbic system  
D) cerebellum  

SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.  

51) Phineas Gage suffered personality changes as a result of damage to his ________ lobes.
MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

52) The cerebral cortex contains about _______ percent of the neurons in the human central nervous system.
   A) 30  
   B) 70  
   C) 50  
   D) 90  

53) The part of the hindbrain involved in emotional control, attention, memory, and coordinating sensory information is the ________.
   A) cerebellum  
   B) midbrain  
   C) medulla  
   D) cerebrum  

54) Messages from separate senses are combined and integrated in the ________.
   A) association areas  
   B) midbrain  
   C) motor projection areas  
   D) sensory projection areas  

55) The part of the cerebral cortex that receives sensory information from throughout the body from sense receptors in the skin, muscles, joints and internal organs is the ________ lobe.
   A) parietal  
   B) frontal  
   C) temporal  
   D) occipital  

56) Which of the following is NOT one of the layers of the brain that evolved in different stages of evolution?
   A) the central core  
   B) the executive core  
   C) the cerebral hemispheres  
   D) the limbic system  

57) The midbrain is largely involved in each of the following functions EXCEPT ________.
   A) hearing  
   B) regulation of hunger and thirst  
   C) perception of pain  
   D) sight  

58) The structure directly over the brain stem that relays and translates sensory information is the ________.
   A) hypothalamus  
   B) thalamus  
   C) hippocampus  
   D) amygdala  

59) Messages from the brain to the various muscles and glands in the body begin their journey in the ________.
   A) association areas  
   B) primary motor cortex  
   C) primary somatosensory cortex  
   D) sensory projection areas  

60) The association areas are to ________ as the cerebellum is to ________.
   A) precise perception; aggressive behavior  
   B) interconnection between hemispheres; aggressive behavior  
   C) temperature regulation; motor coordination  
   D) thinking; motor coordination  

TRUE/FALSE. Write 'T' if the statement is true and 'F' if the statement is false.

61) The limbic system is important to motivation.  

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

62) Which of the following most directly controls bodily reflexes?
A) spinal cord  
B) brainstem  
C) hindbrain  
D) peripheral nervous system

63) The brain is connected to the rest of the body via the:
A) limbic system.  
B) spinal cord.  
C) corpus callosum.  
D) cranial nerve.

64) The spinal cord:
A) can work independently of the brain.  
B) is composed of nerve tissue.  
C) connects the brain to the rest of the body.  
D) all of the above

65) Structurally, the nervous system has _______ major parts.
A) five  
B) four  
C) two  
D) three

66) The _______ gland produces the hormone which regulates the body’s rate of metabolism.
A) thyroid  
B) pituitary  
C) adrenal  
D) parathyroid

67) The pea-sized gland that is stimulated by light and helps regulate activity levels over the course of a day is the:
A) thyroid  
B) pituitary  
C) pineal  
D) adrenal

68) Jeff is 13 years old and he has recently noticed some remarkable changes in himself. Over the past few months his voice has started to change, growing deeper. He has begun to grow pubic hair, as well as the beginnings of a facial beard. He is also filling out, with his muscles developing rapidly. These changes in Jeff are probably due to the action of _______.
A) gonads  
B) adrenal gland  
C) pineal gland  
D) thyroid gland

69) Estrogen is to _______ as testosterone is to _______.
A) ovaries; gonads  
B) ovaries; testes  
C) testes; ovaries  
D) gonads; testes

70) The thyroid and pituitary glands are part of our _______ system.
A) endocrine  
B) motor  
C) limbic  
D) glandular

SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

71) Chemical substances called hormones are released into your bloodstream by the _______ glands.
MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

72) Women’s performance on certain tests of manual dexterity, verbal skills, and perceptual speed has been linked to levels of _______ in their system.
   A) testosterone  B) progesterone  C) estrogen  D) cortisone

73) The _______ influences blood pressure, thirst, contractions of the uterus during childbirth, milk production, sexual behavior and interest, and body growth.
   A) pineal gland  B) pituitary gland  C) thyroid gland

74) Violence is greatest among males between the ages of _______.  
   A) 5 and 15  B) 35 and 45  C) 15 and 25  D) 25 and 35

SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

75) The thyroid gland helps to regulate your body’s _________________.

TRUE/FALSE. Write 'T' if the statement is true and 'F' if the statement is false.

76) The two hormones secreted by the pancreas are insulin and adrenaline.

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

77) A neuron will fire _______.
   A) only when the incoming messages are weaker than the neuron's threshold of excitation
   B) only when the incoming message is stronger than the neuron's threshold of excitation
   C) only when it receives two incoming messages at the same time
   D) in response to every impulse it receives

78) Which of the following is NOT true of neural impulses?
   A) The neuron fires in response to every impulse it receives.
   B) The incoming message must be above a certain threshold to cause a neural impulse.
   C) The neuron may fire during the relative refractory period.
   D) Neural impulses travel at speeds ranging from 3 feet per second to 400 feet per second.

79) If an incoming message is not strong enough to cause a neuron to fire, it may cause a shift in the electrical charge of just a tiny area of the neuron. This shift, which quickly fades away, is called a(n) _______.
   A) resting potential  B) graded potential  C) transitional polarization  D) action potential

80) Neurons that carry messages from the spinal cord or the brain to the muscles and glands are called _______ neurons.
   A) afferent  B) inter-  C) sensory  D) efferent
81) The branch of the autonomic nervous system that calms and relaxes the body is the ________ division.
   A) parasympathetic  B) central  C) sympathetic  D) secondary

82) The peripheral nervous system consists of ________.
   A) the spinal cord and autonomic system  B) the brain and the autonomic system  C) all the nerve cells that are not in the brain and spinal cord  D) the brain and the spinal cord

83) The heavy footsteps on the stairs get closer and closer. Slowly, the door to the bedroom creaks open. As a strange man with a knife in his hand lunges in, you let out an ear-piercing scream. Which of the following most accurately describes your nervous system at this point?
   A) Neither your sympathetic nor your parasympathetic nervous systems are unusually active.  
   B) Your parasympathetic nervous system is more active than your sympathetic nervous system.  
   C) Both your sympathetic and your parasympathetic nervous systems are extremely active.  
   D) Your sympathetic nervous system is more active than your parasympathetic nervous system.

84) The sympathetic and parasympathetic divisions are part of the ________ nervous system.
   A) tertiary  B) central  C) autonomic  D) somatic

85) It’s midnight and you are alone in your room studying. You hear a loud crash outside your room and your whole body reacts instantly. Your pupils dilate, your heart rate increases, your blood pressure rises, adrenaline surges through your body, and your senses sharpen as you begin anxiously looking for whatever caused the crash. These reactions are produced by the ________.
   A) sympathetic division  B) parasympathetic division

86) It’s midnight and you are alone in your room studying. You hear a loud crash outside your room. Your body instantly reacts to this potential threat as you feel your heart pounding and your senses sharpening. Then you see your lumbering English sheep dog walking around the hallway corner and realize that the crash was undoubtedly from something he knocked over. Recovering from your alarm, your body now relaxes and you return to normal. The body system helping you to return to normal is the ________.
   A) parasympathetic division  B) sympathetic division

87) Every deliberate action you make, from pedaling a bike to scratching a toe, involves neurons in the ________ nervous system.
   A) secondary  B) somatic  C) parasympathetic  D) sympathetic

88) Painkilling drugs that lock into the same receptor sites as endorphins are ________.
   A) beta-blockers  B) neuroleptics  C) opiates  D) barbiturates
89) Pain-reducing chemicals that occur naturally in the brain are called _______.  
   A) histamines   B) endorphins   C) androgens   D) globulins

90) At the end of each branch of an axon, there is a tiny knob called the _______.  
   A) synaptic cleft   B) synaptic vesicle   C) receptor site   D) terminal button

91) When a neural impulse reaches the end of an axon, it causes tiny oval sacs at the end of the axon to release chemicals called _______.  
   A) neurotransmitters   B) hormones   C) electrolytes   D) antioxidants

SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

92) Endorphins appear to increase _____________.

93) Tiny sacs in a synaptic knob that release chemicals into the synapse are called _______.  
   A) synaptic vesicles   B) synaptic clefts   C) synaptic nodes   D) synaptic knobs

94) Depression is linked to an _______.  
   A) undersupply of serotonin and norepinephrine   
   B) oversupply of serotonin and norepinephrine   
   C) oversupply of serotonin and an undersupply of norepinephrine   
   D) undersupply of serotonin and an oversupply of norepinephrine

95) A person with schizophrenia is MOST likely to have a problem with which of the following neurotransmitters?  
   A) serotonin   B) dopamine   C) acetylcholine   D) norepinephrine

96) A middle-aged person who is depressed MOST likely has a problem with which of the following neurotransmitters?  
   A) acetylcholine   B) norepinephrine   C) serotonin   D) dopamine

97) Structural imaging techniques are used to _______.  
   A) map structures in the living brain   
   B) observe neural activity as it reacts to sensory stimuli   
   C) study overall activity in particular regions of the brain

98) When brain researchers want to map the structures in a living human brain, they use _______.  
   A) an EEG   B) a CAT scan or an MRI   C) MEG or MSI
99) A technique in which more than two dozen electrodes are placed at important locations on the scalp and they then record the brain's electrical activity in a way that is converted by a computer into colored images on a TV screen and used to detect abnormal cortical activity such as that occurring during an epileptic seizure is _______.
   A) magnetic resonance imaging (MRI)
   B) electroencephalography (EEG) imaging
   C) positron emission tomography (PET) scanning

SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

100) Both CT scanning and MRI provide pictures of brain ______________.  
100) ______________
Answer Key
Testname: CH 2 REV 100 QUES

1) A
   Page Ref: 72
2) B
   Page Ref: 73
3) A
   Page Ref: 72
4) A
   Page Ref: 72
5) C
   Page Ref: 72
6) D
   Page Ref: 72
7) A
   Page Ref: 73
8) A
   Page Ref: 72
9) C
   Page Ref: 72
10) B
    Page Ref: 73
11) C
    Page Ref: 74
12) A
    Page Ref: 69
13) B
    Page Ref: 69
14) C
    Page Ref: 70
15) B
    Page Ref: 70
16) A
    Page Ref: 57-58
17) A
    Page Ref: 58
18) C
    Page Ref: 59
19) A
    Page Ref: 58
20) Page Ref: 56
21) C
    Page Ref: 59
22) A
    Page Ref: 56
23) A
    Page Ref: 57

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Answer Key
Testname: CH 2 REV 100 QUES

24) C
   Page Ref: 57
25) B
   Page Ref: 58
26) C
   Page Ref: 57
27) TRUE
   Page Ref: 57
28) FALSE
   Page Ref: 58
29) FALSE
   Page Ref: 58–59
30) A
   Page Ref: 58
31) C
   Page Ref: 58
32) Page Ref: 56–57
33) A
   Page Ref: 41
34) A
   Page Ref: 48
35) D
   Page Ref: 42
36) D
   Page Ref: 42
37) B
   Page Ref: 42
38) C
   Page Ref: 42
39) C
   Page Ref: 42
40) B
   Page Ref: 42
41) D
   Page Ref: 42
42) C
   Page Ref: 42
43) C
   Page Ref: 42
44) A
   Page Ref: 74
45) C
   Page Ref: 74
46) B
   Page Ref: 53
Answer Key
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47) D
   Page Ref: 53

48) D
   Page Ref: 52

49) D
   Page Ref: 52

50) B
   Page Ref: 52

51)
   Page Ref: 54

52) B
   Page Ref: 52

53) A
   Page Ref: 52

54) A
   Page Ref: 52

55) A
   Page Ref: 55

56) B
   Page Ref: 51

57) B
   Page Ref: 52

58) B
   Page Ref: 52

59) B
   Page Ref: 53–54

60) D
   Page Ref: 52–53

61) TRUE
   Page Ref: 55–56

62) A
   Page Ref: 62

63) B
   Page Ref: 62

64) D
   Page Ref: 62

65) C
   Page Ref: 51

66) A
   Page Ref: 66

67) C
   Page Ref: 66

68) A
   Page Ref: 67

69) B
   Page Ref: 67
Answer Key
Testname: CH 2 REV 100 QUES

70) A
   Page Ref: 66

71) Page Ref: 65

72) C
   Page Ref: 67

73) B
   Page Ref: 66

74) C
   Page Ref: 67

75) Page Ref: 66

76) FALSE
   Page Ref: 67

77) B
   Page Ref: 44

78) A
   Page Ref: 44

79) B
   Page Ref: 44

80) D
   Page Ref: 63

81) A
   Page Ref: 64

82) C
   Page Ref: 63

83) D
   Page Ref: 63–64

84) C
   Page Ref: 63

85) A
   Page Ref: 63–64

86) A
   Page Ref: 63–64

87) B
   Page Ref: 63

88) C
   Page Ref: 47

89) B
   Page Ref: 47

90) D
   Page Ref: 46

91) A
   Page Ref: 46–47

92) Page Ref: 47
Answer Key
Testname: CH 2 REV 100 QUES

93) A
   Page Ref: 46

94) A
   Page Ref: 48

95) B
   Page Ref: 48

96) C
   Page Ref: 47–48

97) A
   Page Ref: 60

98) B
   Page Ref: 60

99) B
   Page Ref: 60

100) Page Ref: 60–61