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**ASSIGN
BUSTER**

Matching Questions Figure 12. 1 Using Figure 12. 1,
match the following:

1) Afferent impulses from all senses and all parts of the body converge here and synapse with at least one of its nuclei. Answer: D Diff: 1

Page Ref: 444; Fig. 12. 11 2) Putamen. Answer: C Diff: 1 Page Ref:

443; Fig. 12. 11 3) Anterior horn of lateral ventricle. Answer: A Diff:

1 Page Ref: 434; Fig. 12. 11 4) Inferior horn of lateral ventricle.

Answer: E Diff: 1 Page Ref: 434; Fig. 12. 11

5) Part of the basal nuclei. Answer: B Diff: 1 Page Ref: 443; Fig. 12.

11 6) Thalamus. Answer: D Diff: 1 Page Ref: 443; Fig. 12. 11

Figure 12. 2 Using Figure 12. 2, match the following: 7) Pons. Answer:

E Diff: 2 Page Ref: 443; Fig. 12. 10 8) Corpus callosum. Answer: A

Diff: 2 Page Ref: 443; Fig. 12. 10 9) Caudate nucleus. Answer: B

Diff: 2 Page Ref: 443; Fig. 12. 10 10) Globus pallidus. Answer: C

Diff: 2 Page Ref: 443; Fig. 12. 10 11) Thalamus. Answer: D Diff: 2

Page Ref: 443; Fig. 12. 10 Figure 12. 3 Using Figure 12. 3,

match the following: 12) Site of efferent soma. Answer: C Diff: 2

Page Ref: 472; Fig. 12. 31 13) Site of axons and afferent neurons.

Answer: B Diff: 2 Page Ref: 474; Fig. 12. 31

14) Site of sensory soma. Answer: E Diff: 2 Page Ref: 474; Fig. 12.

31 15) Gray commissure. Answer: A Diff: 1 Page Ref: 472; Fig. 12.

31 16) Horn usually containing interneurons. Answer: B Diff: 2

Page Ref: 472; Fig. 12. 31 17) Site containing central canal. Answer:

A Diff: 1 Page Ref: 472; Fig. 12. 31

18) Multipolar neurons are common here. Answer: C Diff: 2

Page Ref: 472; Fig. 12. 31 Match the following: 19) Auditory area.

Answer: A Diff: 1 Page Ref: 440 20) Primary sensory cortex. Answer: D
Diff: 1 Page Ref: 439; Fig. 12. 9 A) Temporal B) Occipital C) Frontal
D) Parietal 21) Somatic motor cortex. Answer: C Diff: 1 Page Ref: 438;
Fig. 12. 9 22) Motor speech area. Answer: C Diff: 1 Page Ref: 438; Fig.
12. 9 23) Premotor area. Answer: C Diff: 1 Page Ref: 439; Fig. 12. 8
24) Visual area. Answer: B Diff: 1 Page Ref: 440; Fig. 12. 8
25) Language/speech comprehension area. Answer: A Diff: 1 Page Ref:
438; Fig. 12. 9 26) Taste (gustatory) area. Answer: D Diff: 1 Page Ref:
440; Fig. 12. 9 27) Seat of intelligence, abstract reasoning. Answer: C
Diff: 2 Page Ref: 439; Fig. 12. 8 Match the following:

28) A major relay station for sensory
information ascending to primary sensory areas of the cerebral cortex.
Contains many specialized nuclei. Answer: C Diff: 1 Page Ref: 443; Fig.
12. 12 29) This brain area associates experiences
necessary for the production of abstract ideas, judgment, and conscience.
Answer: B Diff: 1 Page Ref: 441; Fig. 12. 8 A) Primary motor cortex
B) Prefrontal area C) Thalamus D) Hypothalamus
30) The axons from this area form the major pyramidal tracts. Answer: A
Diff: 1 Page Ref: 438; Fig. 12. 9
31) This area is the main visceral control center of the body. Answer: D
Diff: 1 Page Ref: 446; Fig. 12. 12

Match the following stages of sleep with their descriptions:

32) The stage when vital signs (blood pressure, heart rate,
and body temperature) reach their lowest normal levels.
Answer: B C) Stage 3 Diff: 1 Page Ref: 458; Fig. 12. 21 D) REM
33) Indicated by movement of the eyes under the lids; dreaming occurs.

E) Stage 1 Answer: D Diff: 1 Page Ref: 458; Fig. 12. 21

34) Theta and delta waves begin to appear. Answer: C Diff: 1 Page Ref: 459; Fig. 12. 21 35) Very easy to awaken; EEG shows alpha waves;

may even deny being asleep. Answer: E Diff: 1 Page Ref: 459; Fig. 12. 21 36) Typified by sleep spindles. Answer: A Diff: 1 Page Ref: 458; Fig.

12. 21 37) Begins about 90 minutes after the onset of sleep. Answer: D

Diff: 1 Page Ref: 458; Fig. 12. 21 38) Necessary for emotional health; may be neural debugging. Answer: D Diff: 3 Page Ref: 459; Fig.

12. 21 True/False Questions

1) NREM sleep normally exhibits four distinct stages,

which appear to alternate. Answer: TRUE Diff: 1 Page Ref: 459-460

2) Petit mal seizures found in children generally go away with age. Answer:

TRUE Diff: 1 Page Ref: 457

3) NREM sleep episodes are frequently associated with erection of the penis.

Answer: FALSE Diff: 1 Page Ref: 458

4) A flat EEG is a good indication of deep sleep. Answer: FALSE Diff: 1

Page Ref: 457

5) Theta waves are a brain wave pattern that can be seen during deep sleep

and during anesthesia. Answer: FALSE Diff: 1 Page Ref: 456

6) One disorder of the substantia nigra is Parkinson's disease. Answer:

TRUE Diff: 1 Page Ref: 449, 469

7) Cell bodies of the somatic motor neurons of the spinal nerves are located in the ventral horn of the spinal cord. Answer: TRUE Diff: 1 Page Ref:

472 8) Meningitis is the most accurate term for inflammation of neurons.

Answer: FALSE Diff: 1 Page Ref: 465

9) The spinal cord ends at the level of L1. Answer: TRUE Diff: 1

Page Ref: 470

10) Cerebrospinal fluid circulates within the ventricles of the brain and in the subarachnoid space outside the brain. Answer: TRUE Diff: 1

Page Ref: 433-434

11) The terms fainting and syncope describe the same thing. Answer: TRUE Diff: 1 Page Ref: 458

12) The RAS is comprised of specific pathways primarily in the limbic system. Answer: FALSE Diff: 2 Page Ref: 456

13) Nondeclarative memories preserve the context in which they are learned. Answer: FALSE Diff: 1 Page Ref: 461-462

14) The first obvious sign that the nervous system is forming in the embryo is the thickening of the surface ectoderm to form the neural plate. Answer: TRUE Diff: 2 Page Ref: 431

15) The left cerebral hemisphere is usually dominant. Answer: TRUE Diff: 1 Page Ref: 441

16) The limbic system acts as our emotional, or affective, brain. Answer: TRUE Diff: 1 Page Ref: 454

17) The canal connecting the third and fourth ventricles and running through the midbrain is the foramen of Monro. Answer: FALSE Diff: 1

Page Ref: 434 18) Commissural fibers form the corpus striatum. Answer: FALSE Diff: 1 Page Ref: 443

19) A disturbance of posture, muscle tremors at rest,

and uncontrolled muscle contraction are all symptoms of

damage to the basal nuclei. Answer: TRUE Diff: 1 Page Ref: 443

20) Projection fibers in the brain connect the right and left hemispheres. Answer: FALSE Diff: 1 Page Ref: 443

21) Most of the ascending and descending pathways to and from the brain c

cross over from one side of the body to the other. Answer: TRUE Diff: 1

Page Ref: 474-475

22) The primary visual cortex contains a map of visual space. Answer:

TRUE Diff: 1 Page Ref: 440

23) One functional center found within the medulla oblongata is a respiratory center involved in the control of the rate and depth of breathing. Answer:

TRUE Diff: 2 Page Ref: 451

24) Sorting of sensory information and relaying it to the appropriate cerebral sensory area occurs in the hypothalamus. Answer: FALSE Diff: 2

Page Ref: 446

25) Sensory areas of the cortex for the genitals are located deep in the post central gyrus. Answer: TRUE Diff: 2 Page Ref: 436, 438

26) Embryonic damage to the mesencephalon could result in improper formation of the midbrain. Answer: TRUE Diff: 3 Page Ref: 433 Multiple-

Choice Questions 1) The nonspecific ascending pathways _____. A)

are evolutionarily newer than the specific pathways a B)

receive inputs from a single type of sensory receptor r C)

are involved in the emotional aspects of perception a D)

are also called the lemniscal system a Answer: C Diff: 1 Page Ref: 475-

476 2) The superchiasmatic nucleus is found in the _____. A) ons p B)

hypothalamus t C) ypothalamus h D) edulla m Answer: C Diff: 1

Page Ref: 446 3) Nuclei of cranial nerves V, VI,

and VII are found in the _____. A) idbrain m B) edulla m C) ons p

D) erebrum c Answer: C Diff: 1 Page Ref: 450-451

4) The arbor vitae refers to _____. A) erebellar gray matter c B)

erebellar white matter c C) he pleatlike convolutions of the cerebellum t

D) locculonodular nodes f Answer: B Diff: 1 Page Ref: 453

5) The brain stem consists of the _____. A) erebrum, pons, midbrain, and medulla c B) idbrain, medulla, and pons m C) ons, medulla, cerebellum, and midbrain p D) idbrain only m Answer: B Diff: 1

Page Ref: 447-448 6) The primary auditory cortex is located in the _____.

A) refrontal lobe p B) rontal lobe f C) emporal lobe t D)

arietal lobe p Answer: C Diff: 1 Page Ref: 440

7) Spinocerebellar tracts _____. A) erminate in the spinal cord t B)

arry proprioceptive inputs to the cerebellum c C)

ive rise to conscious experience of perception g D)

re found in the dorsal columns of the spinal cord a Answer: B Diff: 2

Page Ref: 476-478 8) The spinal cord has gray matter on the _____.

A) utside, white matter on the inside, and a dorsal motor root o B) nside,

white matter on the outside, and a ventral motor root i C) nside,

white matter on the outside, and a dorsal motor root i D) utside,

white matter on the inside, and a ventral motor root o Answer: B Diff:

1 Page Ref: 470-471

9) The subarachnoid space lies between what two layers of meninges? A)

rachnoid and epidura a B) rachnoid and pia a C) rachnoid and dura a D)

ura and epidura d Answer: B Diff: 1 Page Ref: 464-465

10) The vital centers for the control of heart rate, respiration,

and blood pressure are located in the _____.

A) ons p B) edulla m C)

idbrain m D) erebrum c Answer: B Diff: 1 Page Ref: 451

11) Cell bodies of the sensory neurons of the spinal nerves are located in ____

_____.

A) he dorsal root ganglia of the spinal cord t B)

he ventral root ganglia of the spinal cord t C) he thalamus t D)

ympathetic ganglia s Answer: A Diff: 1 Page Ref: 472, 474

12) The fissure separating the cerebral hemispheres is the _____. A) entral fissure c B) ongitudinal fissure l C) arieto-occipital fissure p D) ateral fissure l Answer: B Diff: 1 Page Ref: 434-436

13) The limbic association area of the multimodal association areas provides our _____. A) motional impact e B) orking memory w C) ecall and personality r D) earning abilities l Answer: A Diff: 1 Page Ref: 441

14) A shallow groove on the surface of the cortex is called a _____. A) ulcus s B) issure f C) yrus g D) urrow f Answer: A Diff: 1 Page Ref: 434

15) The cerebrospinal fluid _____. A) s secreted by the arachnoid villi i B) nters the four ventricles after filling and circulating through the subarachnoid space e C) s secreted mostly by the ependymal cells lining the brain ventricles i D) s formed mostly by the choroid plexuses i Answer: D Diff: 1 Page Ref: 465

16) If the posterior portion of the neural tube failed to develop properly _____. A) he spinal cord may be affected t B) he cranial nerves would not form t C) he hindbrain would not be present t D) he telencephalon would cease development t Answer: A Diff: 1 Page Ref: 431

17) The central sulcus separates which lobes? A) rontal from parietal f B) arietal from occipital p C) emporal from parietal t D) rontal from temporal f Answer: A Diff: 1 Page Ref: 434-436

18) Neural tracts that convey life-saving information to the brain concerning burning pain would be _____. A) nterior spinothalamic a B)

reticulospinal r C) lateral spinothalamic l D) posterior spinothalamic p

Answer: C Diff: 2 Page Ref: 477

19) Which of these would you not find in the cerebral cortex? A)

cell bodies c B) dendrites d C) unmyelinated axons u D) fiber tracts f

Answer: D Diff: 1 Page Ref: 436, 438

20) The hypothalamus _____. A)

is the thermostat of the body since it regulates temperature i B)

is an important auditory and visual relay center i C)

has the Pulvinar body as part of its structure h D) mediates sensations m

Answer: A Diff: 1 Page Ref: 446

21) The white matter of the spinal cord contains _____. A)

myelinated nerve fibers only m B) unmyelinated nerve fibers only u C)

myelinated and unmyelinated nerve fibers m D)

some that have both myelinated and unmyelinated nerve fibers s Answer:

C Diff: 1 Page Ref: 474

22) A lateral tract in the spinal cord would be _____. A) subspinal r B)

reticulospinal v C) ectospinal t D) pyramidal p Answer: A Diff: 1

Page Ref: 478-479

23) An individual accidentally transected the spinal cord between T1 and L1.

This would result in _____. A) paraplegia p B) hemiplegia h C)

quadriplegia q D) spinal shock only s Answer: A Diff: 1 Page Ref: 478-

479 24) Spastic paralysis suggests involvement of the _____. A)

upper motor neurons u B) lower motor neurons l C) spinal nerve roots s D)

neuromotor junction n Answer: A Diff: 1 Page Ref: 478

25) Ridges of tissue on the surface of the cerebral hemispheres are called ____

_____. A) gyri g B) sulci s C) fissures f D) anglia g Answer: A Diff: 1

Page Ref: 434

26) The frontal lobe is separated from the temporal lobe by the _____.

A) longitudinal fissure | B) lateral sulcus | C) central sulcus | D) sphenoidal fossa

Answer: B Diff: 1 Page Ref: 434-436

27) Brodmann's numbering refers to _____.

A) molecular weight of types of neurons | B) counts of neurons per fiber bundle

C) structurally distinct cortical areas | D) dates of neural division in embryogenesis

Answer: C Diff: 1 Page Ref: 436

28) Two terms for the massive motor tracts serving voluntary movement are _____.

A) pyramidal and corticospinal | B) extrapyramidal and rubrospinal

C) segmental and nigrostriatal | D) supplementary and cerebellar-pontine

Answer: A Diff: 1 Page Ref: 478

29) An individual who could trace a picture of a bicycle with his or her finger but could not recognize it as a

bicycle is most likely to have sustained damage to the _____.

A) calcarine cortex | B) primary visual area | C) visual association area | D) lateral geniculate body

Answer: C Diff: 1 Page Ref: 440

30) Broca's area _____.

A) corresponds to Brodmann's area 8 | B) is usually found in the right hemisphere

C) serves the recognition of complex objects | D) is considered a motor speech area

Answer: D Diff: 1 Page Ref: 439

31) The function of commissures is to connect _____.

A) adjacent areas of gray matter within a cerebral hemisphere | B) corresponding areas of the two hemispheres

C) | D)

reas of cortex with lower centers a D)

pyramidal cells with corresponding cerebellar cells p Answer: B Diff: 1

Page Ref: 443 32) The blood-brain barrier is effective against _____. A)

metabolic waste such as urea m B) nutrients such as glucose n C) Alcohol a

D) anesthetics a Answer: A Diff: 1 Page Ref: 467

33) Which of the following is not part of the basal nuclei? A) Putamen p

B) Caudate nucleus l C) Globus pallidus g D) Substantia nigra s Answer:

D Diff: 2 Page Ref: 449

34) All of the following are structures of the limbic system except the _____

_. A) Hippocampus h B) Cingulate gyrus c C) Amygdaloid nucleus a D)

Caudate nucleus c Answer: D Diff: 2 Page Ref: 454-455

35) Which of the following is not a midbrain structure? A) Fourth ventricle t

B) Cerebral peduncles c C) Corpora quadrigemina c D) Red nucleus r

Answer: A Diff: 2 Page Ref: 448-449

36) The process of linking new facts with old facts already stored in the me-

emory bank is called _____. A) Consolidation c B) Automatic memory a

C) Long-term memory l D) Rehearsal r Answer: A Diff: 1 Page Ref:

460-461 37) An electroencephalogram _____. A)

is a record of total body electrical activity i B)

indicates a normal frequency range of 1-30 Hz i C)

indicates an average amplitude of 20-100 V i D)

can only detect abnormal electrical activity c Answer: B Diff: 1

Page Ref: 456

38) The brain area that regulates activities that control the state of wakefuln-

ess or alertness of the cerebral cortex is the _____. A) Thalamus t B)

Reticular formation r C) Pyramids p D) Limbic system l Answer: B Diff: 2

Page Ref: 455-456

39) Which of the following would you not find in normal cerebrospinal fluid?

A) glucose B) red blood cells C) potassium D) protein Answer: B

Diff: 2 Page Ref: 465 40) REM sleep is associated with _____.

A) decreased vital signs, such as heart rate and blood pressure

B) decreased activity of the brain, especially the cerebral cortex

C) temporary skeletal muscle paralysis, except for the extrinsic eye muscles

D) decreased oxygen use, especially in the cerebral cortex Answer: C

Diff: 1 Page Ref: 458-459 41) Mr.

Hom was injured in an accident that completely severed his spinal cord at the level of T12. You would expect to find all of the following except _____.

A) paralysis of the lower extremities

B) loss of sensation below the level of injury

C) slurred speech

D) hyperrespiration in the affected area Answer: C Diff: 2 Page Ref: 478-479

42) Injury to the hypothalamus may result in all of the following except _____.

A) pathologic sleep

B) loss of body temperature control

C) production of excessive quantities of urine

D) loss of proprioception Answer: D Diff: 2 Page Ref: 446

43) White matter of the spinal cord _____.

A) is composed of myelinated fibers only

B) ascends to higher CNS centers

C) has afferent fibers carrying impulses from peripheral sensory receptors

D) contains the anterior and posterior spinocerebellar tracts Answer: D

Diff: 2

Page Ref: 474-475

44) Which statement about aging is most accurate? A)

The brain reaches its maximum weight around the seventh decade of life. B)

ynaptic connections are too fixed to permit a great deal of learning after the age of 35. S C) Despite some neuronal loss,

changing synaptic connections support additional learning throughout life.

D D)

earning throughout the adult and aging years is supported primarily by glial proliferation. L Answer: C Diff: 2 Page Ref: 481

45) Which association is most accurate? A) sensory-anterior s B) motor-medial m C) sensory-medial s D) motor-anterior m Answer: D Diff: 2

Page Ref: 438-439 46) Brain wave amplitude _____. A)

reflects the number of neurons firing synchronously r B)

is an average of about 1 V i C)

results from subtraction of delta waves from theta waves r D)

is the measure of activity of specific individual neurons i Answer: A Diff: 2 Page Ref: 456-457

47) Declarative memory is not stored in the _____. A) hippocampus h

B) amygdala a C) thalamus t D) mammillary body m Answer: D Diff: 2

Page Ref: 461 48) Huntington's disease _____. A)

begins to appear at ages 10 to 15 b B)

has symptoms that are the opposite of Parkinson's disease h C)

usually subsides by ages 35 to 40 u D)

may be a result of a defective 26th chromosome m Answer: B Diff: 1

Page Ref: 469-470 49) The corpus striatum plays a special role in _____.

A) face recognition f B) fact learning f C) spatial learning s D)

skill learning s Answer: D Diff: 1 Page Ref: 461-462

50) Storing information in long-term memory _____. A)

depends on the remaining capacity of long-term memory d B)

s interfered with by emotional arousal i C)

s facilitated by the release of norepinephrine i D)

s always dependent on the formation of conscious impressions i Answer:

C Diff: 1 Page Ref: 461

51) Important nuclei of the indirect (multineural) system that receive impulses from the equilibrium apparatus

of the inner ear and help to maintain balance by varying muscle tone of post u