Psychology 2012 – 03 – Spring 2005 - Exam 2

There are two versions of the test – you have version A. Before you start the exam: Mark (A) on line 60 of your answer sheet, and mark sure that you put your exam in the correct pile at the end of the exam.

MULTIPLE CHOICE. Mark the letter that best completes the statement or answers the question. Use a #2 pencil, and if you need to erase, please do so completely. Please use the answer sheets provided by us.

GOOD LUCK!

1) Which contrast X-ray technique is designed to locate vascular abnormalities in the brains of human patients?
   A) PET scans
   B) electroencephalogram
   C) cerebral angiography
   D) CT scans
   E) pneumoencephalography

2) Most sensory nuclei of the thalamus project to the
   A) reticular formation.
   B) caudate.
   C) substantia nigra.
   D) cerebellum.
   E) cerebral cortex.

3) High-acuity, color vision is mediated by the small foveal area of the retina. Nevertheless, we have perceptions of the world that are expansive in both their color and their detail. This is possible because
   A) we have depth perception.
   B) our visual systems integrate the foveal images from several different visual fixations to produce the visual perception that we are experiencing at any instant.
   C) of the difference between the photopic and scotopic spectral sensitivity curves.
   D) of the optic disks.
   E) accommodation.

4) Another name for primary visual cortex is
   A) foveal cortex.
   B) lateral geniculate cortex.
   C) optic cortex.
   D) retino cortex.
   E) striate cortex.
5) A neural circuit that includes the medial prefrontal cortex, hippocampus, and amygdala, is thought to be involved in the regulation of emotions, memory and some forms of social responsiveness. This circuit is called the
A) paleocortex.
B) limbic system.
C) basal ganglia.
D) somatosensory system.
E) cranial nerves.

6) The receptive field of a visual neuron is the area of the
A) striate cortex within which stimulation can activate the neuron.
B) striate cortex within which stimulation can inhibit the neuron.
C) visual field within which the suitable visual stimulus can influence the firing of the neuron.
D) lateral geniculate within which stimulation can activate the neuron.
E) none of the above

7) The receptive fields of most retinal ganglion cells are roughly
A) rectangular.
B) round.
C) columnar.
D) square.
E) perpendicular.

8) Any morphine-like substance that occurs naturally in the brain is called
A) autoopium.
B) an endorphin.
C) an autoreceptor.
D) a false transmitter.
E) a benzodiazepine.

9) The caudate, putamen, and globus pallidus compose the
A) limbic system.
B) thalamus.
C) basal ganglia.
D) somatosensory system.
E) diencephalon.
10) Acetylcholine  
A) plays an important role in the contraction of skeletal muscles.  
B) is produced by cholinergic neurons which project to the hippocampus and cortex - many of these neurons are lost in Alzheimer's Disease.  
C) is a soluble gas.  
D) both A and B  
E) both B and C

11) Meningitis  
A) is an infection of the brain itself.  
B) can be an infection of the arachnoid layer or the pia mater.  
C) can include infection of the cerebrospinal fluid.  
D) both A and B  
E) both B and C

12) Which of the following are considered to be small-molecule neurotransmitters?  
A) peptide neurotransmitters  
B) monoamine neurotransmitters  
C) amino acid neurotransmitters  
D) both A and B  
E) both B and C

13) The hypothalamus is involved in regulation of  
A) feeding  
B) temperature regulation  
C) sexual behavior  
D) all of the above  
E) none of the above

14) Light enters the human eye through an opening in the iris called the  

15) Which of the following are synthesized from tyrosine?  
A) monoamines  
B) acetylcholines  
C) indolamines  
D) amino acids  
E) catecholamines

16) The caudate and the putamen compose the  
A) striatum.  
B) uvula.  
C) globus pallidus.  
D) limbic system.  
E) amygdala.
17) A larger dose of drug A than drug B is required to produce a clinical improvement.  
A) Drug A is more potent than drug B.  
B) You might want to order drug A from Canada.  
C) Drug B is more potent than drug A.  
D) Drug A is more efficacious than Drug B  
E) both A and B

18) Which is the most prevalent excitatory neurotransmitter in the mammalian CNS?  
A) glutamate  
B) glycine  
C) acetylcholine  
D) dopamine  
E) GABA

19) The reaction that transduces light into an electrical signal in rods is the  
A) inhibition of action potentials in rods.  
B) bleaching of rhodopsin by light.  
C) elicitation of action potentials in cones.  
D) elicitation of action potentials in rods.  
E) turning red of rhodopsin.

20) The ability of a stationary eye to fill in the gap in its visual field that results from the optic disk is called  
A) convergence.  
B) foveal summation.  
C) binocular extraction.  
D) blind spotting.  
E) completion.

21) Which of the following is not part of the somatic nervous system?  
A) sensory systems involved in voluntary movement  
B) the sympathetic nervous system  
C) the cranial nerves  
D) motor systems involved in voluntary movement  
E) none of the above

22) A compelling illustration of contrast enhancement is  
A) the Mach band demonstration.  
B) the complementary color afterimage demonstration.  
C) lateral inhibition.  
D) color constancy.  
E) the cocktail sausage demonstration.
23) The functions of the occipital cortex are
A) visual.
B) auditory.
C) olfactory.
D) somatosensory.
E) motor.

24) The pons and the medulla are brainstem structures particularly important for
A) regulating sexual behavior.
B) controlling respiration and heart rhythms.
C) recognizing faces.
D) learning fine motor control.
E) none of the above.

25) With respect to vision, wavelength is to intensity as
A) color is to loudness.
B) color is to pattern.
C) wavelength is to color.
D) vision is to audition.
E) color is to brightness.

26) Drugs that block the **reuptake** of a neurotransmitter from the synapse are
A) antagonists of that neurotransmitter.
B) agonists of that neurotransmitter.
C) receptor blockers.
D) enzymes of that neurotransmitter.
E) ligands of that neurotransmitter.

27) Which of the following can provide images of brain **activity**
A) Magnetic Resonance Imaging (MRI)
B) contrast X-ray
C) Positron Emmission Tomography (PET)
D) angiography
E) computerized tomography (CT)

28) The on the surface of the cortex, the ridges between fissures are called
A) gyri.
B) sulcuses.
C) sulci.
D) commissures.
E) lobes.
29) Which of these structures is involved in hearing, language, some forms of learning and memory, and advanced visual processing
A) parietal lobes
B) occipital lobes
C) cerebellum
D) temporal lobes
E) frontal lobes

30) This brain structure plays a major role in voluntary motor responses
A) frontal lobe
B) basal ganglion
C) reticular formation
D) amygdala
E) none of the above

31) Excess cerebrospinal fluid is continuously absorbed into dural sinuses from the
A) first ventricle.
B) second ventricle.
C) third ventricle.
D) fourth ventricle.
E) subarachnoid space.

32) Which of these neurotransmitters commonly inhibits motor neuron activity in the spinal cord?
A) GABA  B) serotonin  C) glutamate  D) aspartate  E) glycine

33) High-acuity vision is associated with the
A) blind spot.
B) fovea.
C) choroid.
D) optic disk.
E) sclera.

34) The longitudinal fissure separates the two hemispheres of the brain. Which lobe does not border it?
A) temporal lobe
B) occipital lobe
C) prefrontal lobe
D) frontal lobe
E) parietal lobe
35) The reticular formation is in the
A) forebrain.
B) cerebellum.
C) hindbrain.
D) spinal cord.
E) thalamus.

36) Hydrocephalus
A) occurs when insufficent CSF is produced.
B) can occur as the result of a tumor, or scarring of the meninges.
C) can occur if too much CSF is produced.
D) both A and B
E) both B and C

37) Deterioration of the pathway from the substantia nigra to the striatum is found in most cases of
A) Asti Spumante.
B) Korsakoff’s syndrome.
C) multiple sclerosis.
D) Parkinson's disease.
E) autism.

38) Snakes can see in
A) what for humans would be complete darkness.
B) what for snakes is complete darkness.
C) infrared light.
D) both A and C
E) both B and C

39) You see a rabid pitbull! The rabid pitbull sees you !! Your heart rate is increased by excitatory signals from the
A) efferent arm of the parasympathetic nervous system.
B) afferent arm of the parasympathetic nervous system.
C) somatic nervous system.
D) sympathetic nervous system
E) enteric nervous system

40) Which of the following thalamic nuclei relays visual information?
A) red nucleus
B) lateral geniculate
C) pons
D) substantia nigra
E) caudate
41) Which of the following is accomplished by the ciliary muscles?
   A) pupil constriction
   B) accommodation
   C) tracking
   D) color vision
   E) none of the above

42) Cocaine is a
   A) norepinephrine agonist.
   B) blocker of catecholamine reuptake.
   C) dopamine agonist.
   D) all of the above
   E) both A and B

43) Light passes through layers of the retina in which of the following sequences?
   A) photoreceptor layer, bipolar cell layer, retinal ganglion cell layer
   B) retinal ganglion cell layer, bipolar cell layer, photoreceptor layer
   C) bipolar cell layer, retinal ganglion cell layer, photoreceptor layer
   D) photoreceptor layer, retinal ganglion cell layer, bipolar cell layer
   E) none of the above

44) Functional MRI generates images of increases to active areas of the brain of
   A) nitric oxide flow.
   B) oxygen flow.
   C) 2-DG.
   D) alpha waves.
   E) water flow.

45) The perception of an edge is in effect the perception of a
   A) line.
   B) line separating two adjacent areas of the visual field.
   C) contrast between two adjacent areas of the visual field.
   D) line between two adjacent areas of the retina.
   E) contour.

46) From outside to inside, the three meninges are the
   A) dura, meninx, and pia.
   B) Nina, Pinta, and Santa-Maria.
   C) dura, arachnoid, and pia.
   D) arachnoid, dura, and pia.
   E) dura, pia, and arachnoid.
47) Saccades are
A) connections between the photopic and scotopic systems.
B) blind spots.
C) centers of color vision.
D) retinal neurons.
E) rapid eye movements.

48) Primary somatosensory cortex is in the
A) is in the occipital lobe.
B) is organized according to a map of the body surface.
C) is organized in a manner similar to primary motor cortex.
D) both A and B
E) both B and C

49) Which of the following can be found at the blind spot?
A) bipolar cells
B) the axons of retinal ganglion cells
C) cones
D) rods
E) fovea

50) In comparison to the photopic system, the scotopic system has more
A) receptors in the periphery of the retina.
B) sensitivity in dim illumination.
C) convergence.
D) rods.
E) all of the above
MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

1) C
2) E
3) B
4) E
5) B
6) C
7) B
8) B
9) C
10) D
11) E
12) E
13) D
14) E
15) E
16) A
17) C
18) A
19) B
20) E
21) B
22) A
23) A
24) B
25) E
26) B
27) C
28) A
29) D
30) B
31) E
32) E
33) B
34) A
35) C
36) E
37) D
38) D
39) D
40) B
41) B
42) D
43) B
44) B
45) C
46) C
47) E
48) E
49) B
50) E