Practice Quiz Answers w/out Tracts : Thomadaki & Philomin: "You have history next? Greaaatt…."

1.	Midbrain, Pons, Medulla
2.	the outside or "bark" of the brain, which contains cell bodies (called gray matter)
3.	Dura mater, Arachnoid mater, Pia mater
4.	2 layers, outer covers brain, inner covers brain and spinal cord
5.	Subdural & Epidural, only exists in case of infection or disease due to blood leak or tumors
6.	Cerebral spinal fluid
7.	endoneurium
8.	fascicles, covered by perineurium
9.	Membrane that covers groups of fascicles to form a nerve
10.	Somatic and Visceral nervous systems
11.	Efferent – traveling from CNS out to body : Afferent – traveling from body to brain
12.	Afferent – skin, skeletal muscle, bone
13.	Efferent – skeletal muscle (for movement)
14.	smooth muscle, cardiac muscle, glands, organs
15.	Autonomic Nervous system
16.	digest and secrete
17.	Glial cells and neurons
18.	Support cells of the CNS
19.	Oligodenrocytes, Astrocytes, and Ependymal/Choroidal cells
20.	10x to 50x
21.	phagocytes derived from macrophages
22.	Express antigens and respond to injury, infection and disease
23.	Oligodendrocytes
24.	Schwann Cells
25.	Oligodendrocytes produce up to 15 myelin sheaths
26.	Schwann cells envelope 1 cell
27.	Saltatory conduction (vacuum to "suck" ions between nodes)
28.	Epithelium that line ventricles of the brain
29.	collection of vessels found throughout vesicles in the brain
30.	Choroidal cells, found in Choroid plexus
31.	Four (3 in true brain)
32.	astrocytes
33.	blood-brain-barrier - on vessels going to the brain : glial limiting membranes – on CNS neurons
34.	allows small, highly lipid soluble substances, prevents large complex objects from entering CNS
35.	Tight junction (astrocyte end feet on CNS capillaries)
36.	Growth or retraction
37.	Regulate nutrient passage between neurons

38.	soma
39.	dendrite
40.	Rough ER in neurites
41.	site where action potential is initiated, between soma and axon
42.	axon terminal or presynaptic terminal, contains synaptic vesicles
43.	the transport of NTs from the soma to the bouton – No rER in axon so NTs must be made in soma
44.	Anterograde (forward) and Retrograde (backward)
45.	Nodes of Ranvier
46.	AP travels faster down axon (stronger vacuum)
47.	area receiving info to be propagated producing a graded signal based on intensity of input
48.	Receptor potential
49.	Synaptic potential
50.	area of neuron where "all-or-none" AP is generated – also called the Spike Initiation zone
51.	area responsible for propogating the AP
52.	area responsible for release of NTs – amount released based on number and frequency of APs
53.	Unipolar(none), Bipolar(retinal cells), Pseudo-unipolar(DR ganglion), Multipolar (motor neuron)
54.	collection of cell bodies in CNS (gray matter)
55.	collection of cell bodies in PNS
56.	dorsal horn, ventral horn
57.	Closed and activatable (rest), Open (active), or Closed and non-activatable (inactive, refractory)
58.	Ligand (Chemical), Phosporylation (ATP), Voltage (Charge), Mechanically (Strechng)
59.	-65mV, Membrane distribution of major ions passing through non-gated ion channels
60.	Vm > -65 = depolarization : Vm < -65 = hyperpolarization
61.	Na^+ and Cl^-
62.	K^+ and organic anions (negatively charged amino acids too large to permeate membrane)
63.	charge within the cell when an ion's movement is in equilibrium, in the absence of all other ions
64.	Na/K pump (3Na out, 2K in)
65.	mechanical, electric, or chemical
66.	stimulus causes influx of Na^+ → charge of cell changes → voltage gated ion channels open → receptor potential created
67.	receptor potential – cell of sensory input : synaptic potential – subsequent neurons
68.	Trigger Zone
69.	Resting potential (-65), Rising Phase (influx of Na^+, depolarization occurs) , Overshoot (Na^+ channels "lock" after 1 msec, K^+ channels open), Falling Phase (K^+ flows out, hyperpolarization occurs), Undershoot (K^+ flow tapers off, ATPase attempts to reestablish resting potential)
70.	If receptor potential reaches threshold, voltage gated Na^+ channels open and large influx occurs due to density of channels

71.	time when AP is absolutely unable to initiate another AP (falling phase)
72.	time when AP threshold is elevated and another AP is difficult to initiate (undershoot)
73.	Electric, Chemical
74.	direct ionic transfer through gap junctions
75.	NT released into synaptic cleft and binding to receptors
76.	mutation that prevents myelin sheaths from forming gap junctions in the periphery nerves
77.	Excitatory/Axodendritic – NT affects positive-ion channels/receptors
78.	Inhibitory/Axosomatic – NT affects negative-ion channels/receptors
79.	axoaxonic synapses (frequency)
80.	EPSP = excitatory postsynaptic potential (product of individual excitatory synapse)
81.	IPSP = inhibitory postsynaptic potential (product of individual inhibitory synapse)
82.	graded sum of EPSP and IPSP inputs on postsynaptic membrane
83.	accumulation of consecutive synaptic potentials at same site
84.	input of many presynaptic neurons acting on different sites of one neuron at the same time
85.	vesicles that store and release NTs and bind to active zones in presynaptic membrane
86.	Calcium influx causes release of NTs
87.	NTs whose receptors gate positive ions into intracellular fluid (depolarize)
88.	NTs whose receptors gate negative ions into intracellular fluid (polarize)
89.	utilize metabotropic receptors and have excitatory or inhibitory influence on postsynaptic cell
90.	bind to unused NTs in synaptic cleft, and terminate the release of NTs from presynaptic cell
91.	reuptaken by presynaptic membrane, reloaded in vesicles by glia, or destroyed in cleft
92.	neuromuscular junction and autonomic ganglia (PNS NT)
93.	dopamine, norepinephrine/epinephrine = catecholamines
94.	Serotonin
95.	Histamine
96.	Glutamate (CNS excitation), Glycine (spinal cord inhibitory interneurons), and GABA (CNS inhibition – suppress cortical function)
97.	Opiods – CNS receptors for pain suppression
98.	sites on postsynaptic membrane that contain NT receptors
99.	Ligant (ionotropic) – NT binds to receptor, channel opens : 2nd Messenger Coupled (Metabotropic) – NT binds to receptor which activates a 2nd messenger that opens ion channels
100.	Nicotinic (skeletal muscle contraction) : Muscarinic (slows contraction of cardiac muscle)
101.	nicotine, curare
102.	muscarine, atropine
103.	Glutamate
104.	AMPA or Kainate receptors
105.	AMPA/Kainate, CNQX

106.	glycine, Mg^{2+}, Zn^{2+}, PCP, and allows influx of Ca^{2+}
107.	inhibitory, controls ion passage through channel (gate size control)
108.	Mg^{2+} acts as gate-keeper, Zn^{2+} carries out function of Mg^{2+} if absent
109.	APV
110.	Multiple Sclerosis – scar tissue replaces demyelinated sites (upper motor neurons)
111.	paresthesias, internuclear ophthalmoplegia, extremity incoordination, paresis with spasticity (hypertonia – cerebellum)
112.	a multi-organ autoimmune disease that destroys nuclei
113.	abnormal sensation
114.	adducting eye doesn't follow other eye
115.	weakness, flexion due to lower motor neurons continually firing
116.	benign (mild relapses, complete recovery), mild (moderate relapses, accumulating neuro deficit), progressive (steady progression w/out remission), severe (frequent relapses w/ partial recovery)
117.	acute PNS demyelinating disease (lower motor neurons), maybe viral initiated
118.	"glove and stocking" pattern of paresthesia, paresis with atrophy
119.	anti-viral therapy and cortisone
120.	affects upper and lower motor neuron function, kills every skeletal muscle in body slowly
121.	hand weakness, atrophy with hyperreflexia → 90% fatality within 6 years
122.	affects facial nerve, causes one side of face to droop (result of stroke)
123.	autoimmune disease of the neuromuscular junction – destruction of nicotinic Ach receptors
124.	fluctuating weakness and fatigue of skeletal muscle, thymic tumors, ptosis, dysphonia, dysphagia
125.	thymectomy and neostigmine (Achase inhibitor) – reduced Ach destruction in the cleft
126.	interruption of the function for any reason
127.	injury to nerve (usually the axon)
128.	reaction of proximal neuron fragment
129.	Eccentric nucleus, Nissl bodies fragment, RNA/protein synthesis increase, gene expression change
130.	Apoptosis, natural degeneration
131.	Wallerian degeneration
132.	axon degenerates, myelin sheath is fragmented, axon and myelin debris destroyed by microglia
133.	in one-to-one synapse, lack of input causes postsynaptic neuron to atrophy and die
134.	in one-to-one synapses, synaptic space between presynaptic cell and damaged neuron increases and is interrupted by glial cells, attempts isolation
135.	proximal portion extends cytoplasmic sprouts, Schwann cells in remaining endoneurium release chemotropic factors to attract sprouts, sprout extends into endoneurium and becomes new axon
136.	Coil up and become a neuroma causing abnormal sensations
137.	fibers from salivary and sweat glands cross – causes sweating while eating
138.	Myelination occurs while axonal growth is occurring

139.	Axon grows to full size, then it is mylinated
140.	Schwann cells, growth promoting factors
141.	Growth inhibiting factor
142.	Less available proteins
143.	Scarring, astrocyte proliferation, microglia & immune cell recruitment, and inflammation
144.	Immunosuppressant's and anti-inflammatory drugs
145.	Vestibulocochlear, Facial, Abducent, Trigeminal
146.	Sensory, Floor, forth
147.	Cerebellopontine angle
148.	Balance and Equilibrium in connection to the position and movement of the head, and auditory
149.	Vertigo and nystagmus
150.	Deafness and Tinnitus
151.	Uncontrollable rhythmical oscillations of the eye
152.	Persistent buzzing/ringing sound
153.	Both motor and sensory
154.	Facial nucleus(pons), muscles of facial expression
155.	tractus solitarus (medulla), taste of anterior tongue
156.	salivatory (pons), salivary glands
157.	IX and VII
158.	Supranuclear, lower opposite side of the face
159.	Infranuclear, same half of the face
160.	Bell's palsy
161.	Innability to close eye, drooping lower eyelid, tearing, drooling, drooping of mouth, etc.
162.	Smile while closing eyes tightly
163.	Motor & sensory
164.	Muscles of mastication
165.	Nucleus of the spinal tract
166.	Mesencephalic nucleus (muscles of face)
167.	principle sensory nucleus, (skin of face, sinouses, nose, tongue, teeth, and gums
168.	deviation of jaw, inability to bite down, tic douloureux, facial anesthesia, shingles, headache
169.	Herpes zoster, unilateral pain, sensory distribution of the nerve
170.	Tic douloureux (Trigeminal neuralgia)
171.	Same side because of unopposed action of the contralateral side pterygoid muscle
172.	VI, motor
173.	Nucleus is in the pons, exits between the basilar pons and pyramid of medulla
174.	Innervate lateral rectus muscle of the eyeball, ipsilateral
175.	Medial strabismus

176.	ANS, somatic and visceral sensation, muscles : (coma)
177.	Contra lateral hemipareses of trunk and extremities
178.	Contra lateral weakness of the lower face
179.	Loss of vibration sensation, discriminatory tactile sensation and contra loss of propriception
180.	Sensory info enters spinal cord via dorsal roots, Motor information leaves via ventral roots
181.	Knowledge of limbs is space
182.	Oculomotor III, and Trochlear IV
183.	Levator palpebrae superioris
184.	SO4, Trochlear Nerve IV
185.	LR6, Abducens Nerve VI
186.	Oculomotor Nerve III
187.	Superior Colliculus, Periaqueductal grey
188.	Edinger-Westpall nucleus (parasypmpathetic)
189.	Pupillary light reflex
190.	Trochlear
191.	Accomodation reflex
192.	Double vision
193.	Loss of conjugate movement
194.	Dilated pupil
195.	Paralysis of sphincter papillae and unopposed dilation action by sympathetic
196.	Paralysis of the ciliaris, loss of accommodation reflex
197.	Periaqueductal grey at the level of the inferior colliculus
198.	Ptosis, lateral strabismus, diplopia, mydriasis, cycloplegia, and loss of light reflex
199.	Weakness of downward gaze and diplopia when looking downward and inward
200.	Superior medullary velum
201.	Pons, facial colliculus
202.	VI, medial strabismus and diplopia
203.	Visual pathway
204.	Contralateral cerebellar nuclei, cerebellar cortex
205.	Posture and muscle tone
206.	Muscle rigidity (cog wheel), slow tremor (pill roll), bradykinesia, and shuffling gait.
207.	Poverty in movement, difficulty initiating movements and no involuntary movements
208.	Corticospinal, corticalpontine, corticobulbar, (all motor)
209.	Medial longitudinal facsciculus
210.	Visual reflex information from the optic tract
211.	Internuclear ophthalmoplegia
212.	Auditory

213.	Lateral leminiscus, inferior auditory pathway
214.	Contralateral cerebellar dystaxia (diff. controlling voluntary movements) with intention tremors
215.	10%, 50%
216.	Into
217.	Fine tuning, motor learning
218.	Dorsolateral fissure
219.	Molecular layer (cell b's,dendrites,axons), purkinje layer (cell bodies), granular layer (cell bodies)
220.	Mossy fibers
221.	Inferior olivary nucleus
222.	Sensory and visual
223.	Deep cerebellar nuclei and granule cells, purkinje cells
224.	Deep cerebellar nuclei and purkinje cells
225.	Deep cerebellar nuclei, for smooth muscle movement
226.	Purkinje fibers
227.	Dentate, emboliform, globose, fastigial
228.	Flocculonodular, medial cerebellar hemispheres, and lateral cerebellar hemispheres
229.	Fastigial nucleus
230.	Globose and emboliform nuclei
231.	Dentate nuclei
232.	Vestibular cues, truncal ataxia, in-coordination, failed tandem gait
233.	Posture and locomotion, distal limb
234.	Hypotonia, pendular reflexes, scanning speech, appendicular ataxia dysmetria, ataxic joint motion, and intention tremor
235.	Extended reflex occilations
236.	Slurred unemotional speech
237.	Lack of proper distal movement with failure to judge distance
238.	Gross tremor that disappears at rest
239.	Control and preparation of movement
240.	Lack of point of reference, have to consciously think what to do to perform a task