

Quiz Questions : Thomadaki : "Sure you could... although that may not be the best of ideas."

### RECEPTOR INTRO

1. In a pseudo-unipolar neuron, what perpetuates the action potential?
2. What 'receptors' have no true pad?
3. Thermal and nociceptors are \_\_\_\_\_ and \_\_\_\_\_ fiber groups.
4. Mechanoreceptors are \_\_\_\_\_ and \_\_\_\_\_ fiber groups.
5. Ruffani are for \_\_\_\_\_, pacinian for \_\_\_\_\_, merkel for \_\_\_\_\_, and meissner for \_\_\_\_\_.
6. When are fast somatic receptors excited?
7. When are slow somatic receptors excited?
8. What are the fast somatic receptors, from small to large?
9. What are the slow somatic receptors from small to large?
10. \_\_\_\_\_, \_\_\_\_\_, and \_\_\_\_\_ is soma.
11. \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, and \_\_\_\_\_ is visceral.
12. What is the order of skin receptor myelination?
13. What is the order of muscle receptor myelination?

### DEEP SENSIBILITY

14. What are the three systems/tracts of deep sensibility?
15. What are the modalities of deep sensibility?
16. What is the ability to recognize three dimensional objects by touch?
17. Discriminatory touch is important for what two abilities?
18. \_\_\_\_\_ carries proprioception from upper extremities, lower are carried by \_\_\_\_\_.
19. Lower extremity DS goes from the \_\_\_\_\_ to \_\_\_\_\_ to \_\_\_\_\_ without \_\_\_\_\_.
20. The most medial fibers represent the \_\_\_\_\_ of lower extremity DS.
21. Upper extremity DS goes from the \_\_\_\_\_ to \_\_\_\_\_ to \_\_\_\_\_ without \_\_\_\_\_.
22. Upper extremity unconscious proprioception enter the cerebellum as the \_\_\_\_\_.
23. What are sent for reflexes?
24. Where do the fibers of the reflexes travel?
25. For the DSCT, dorsal root ganglion enter the \_\_\_\_\_ and synapse with the \_\_\_\_\_.
26. The nucleus dorsalis gives rise to the \_\_\_\_\_ which \_\_\_\_\_.
27. In the medulla what does the conscious proprioception fibers synapse with?
28. In the medulla what structure does the unconscious proprioception fibers enter?
29. Who carries conscious proprioception only? Unconscious only? Both?
30. What is the order of travel for the VSCT?
31. \_\_\_\_\_, \_\_\_\_\_, & \_\_\_\_\_ combine to form the arcuate fibers that cross the \_\_\_\_\_, forming what?
32. How is the medial lemniscus somatotopically arranged in the medulla?
33. How is the medial lemniscus somatotopically arranged in the midbrain?



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## PAIN AND TEMPERATURE

34. Nociceptors respond to what?
35. Nociceptor pain results from nociceptor activation due to \_\_\_\_\_.
36. Neuropathic pain is pain resulting from \_\_\_\_\_.
37. Pain is \_\_\_\_\_ of an unpleasant stimulus not necessarily a product of \_\_\_\_\_.
38. \_\_\_\_\_ is transmitted to the spinal cord by myelinated A $\delta$  fibers.
39. \_\_\_\_\_ is transmitted to the spinal cord by unmyelinated C fibers.
40. What type of stimuli is carried by myelinated A $\delta$  fibers?
41. What type of stimuli is carried by unmyelinated C fibers?
42. What may explain referred visceral pain?
43. What is primary hyperalgesia?
44. Primary hyperalgesia results from the release of what 6 things?
45. The local substances that were released in primary hyperalgesia do what?
46. What is central hyperalgesia?
47. What is central hyperalgesia due to?
48. What may central hyperalgesia result in?
49. In the DL fasciculus of Lissauer, where do the axons go before synapsing in the dorsal horn?
50. What type of axons are found in the dorsolateral fasciculus of Lissauer?
51. Primary afferents synapses with the \_\_\_\_\_, \_\_\_\_\_, and \_\_\_\_\_ of the dorsal horn.
52. The interneurons of lissauer control \_\_\_\_\_.
53. Axons of the \_\_\_\_\_ cross in the \_\_\_\_\_ to form the Lateral spinothalamic tract.
54. Secondary afferents ascend to the thalamus in the \_\_\_\_\_ system.
55. The LSTT sends collaterals to the \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, and \_\_\_\_\_.
56. What is the gate control theory of pain based on?
57. \_\_\_\_\_ mechanoreceptors send collaterals to the \_\_\_\_\_ which in turn inhibits \_\_\_\_\_.
58. \_\_\_\_\_ and \_\_\_\_\_ nociceptors send excitory signals to the \_\_\_\_\_, inhibiting the \_\_\_\_\_.
59. Mechanoreceptors \_\_\_\_\_ pain, while nociceptors \_\_\_\_\_ pain, thus \_\_\_\_\_ occurs.
60. What are TENS units and what are they based on?
61. Stimulation of what results in specific analgesia?
62. What is analgesia? What is anesthetic?
63. Stimulation of the periaqueductal gray also results in what?
64. What two structures can the periaqueductal excite?
65. What do the periaqueductal stimulated structures travel in and what do they inhibit?
66. The descending inhibitory pathways ultimately interfere with what?
67. What two things administered in the periaqueductal grey result in anesthesia?
68. Are all opiate receptors in the body used for pain control?



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### DIENCEPHALON: THALAMUS

69. What four areas make the diencephalon?
70. What is the primary function of the thalamus?
71. 70% of the population have what structure that transverses the third ventricle?
72. Where is the thalamus found?
73. The thalamus is a collection of \_\_\_\_\_ and \_\_\_\_\_.
74. What is the ependymal lining?
75. The lateral surface of the thalamus is covered by a thin sheet of fibers called the \_\_\_\_\_.
76. What is the vertical sheet of \_\_\_\_\_ dividing the thalamus?
77. All sensations except \_\_\_\_ pass through the thalami, but are not \_\_\_\_\_ yet.
78. The thalamus mediates \_\_\_\_\_ from the cerebellum and basal ganglia to the \_\_\_\_\_.
79. Essentially, what does question 78 mean?
80. What are the 6 motor groups of the thalamus?
81. The anterior nucleus forms \_\_\_\_\_, which is the posterior boundary of the \_\_\_\_\_.
82. The anterior nucleus receives \_\_\_\_\_ information. Where is it received from?
83. What is the function of the anterior nucleus?
84. What is Korsakoff's syndrome?
85. What specific structures are commonly destroyed in Korsakoff's syndrome?
86. What clinically results from Korsakoff's syndrome?
87. The medial group of nuclei receive information from what sources?
88. The medial group of nuclei project to the \_\_\_\_\_.
89. The medial group of nuclei function in \_\_\_\_\_.
90. Ablation of the medial group results in what?
91. Ventral anterior and ventral lateral receive information from what sources?
92. VA and VL project into the \_\_\_\_\_.
93. VA and VL function in \_\_\_\_\_.
94. Stimulation of the VA/VL causing an increase in what? Ablation does what?
95. All sensation but smell reach consciousness where in the thalamus?
96. All sensory information from head & face becomes conscious & integrated by what?
97. All sensory information from the body becomes consciousness & integrated by what?
98. A lesion to the Ventral posterior nucleus would result in \_\_\_\_\_ and \_\_\_\_\_.
99. What is thalamic stroke?
100. The medial geniculate body receives information from what sources?
101. The medial geniculate body projects to the \_\_\_\_\_.
102. Lesion to the medial geniculate body produces what?
103. The lateral geniculate body receives information from what source?



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104. The lateral geniculate body projects to the \_\_\_\_\_.
105. Lesion to the lateral geniculate body produces \_\_\_\_\_.
106. The lateral dorsal nucleus has reciprocal connections with what?
107. The lateral dorsal nucleus functions in \_\_\_\_\_.
108. The lateral posterior nucleus has reciprocal connection with what?
109. The lateral posterior nucleus functions in \_\_\_\_\_.
110. The pulvinar receives fibers from what sources?
111. The pulvinar projects into the \_\_\_\_\_ and functions in \_\_\_\_\_.
112. The reticular nucleus has reciprocal connection with what?
113. The reticular nucleus functions in \_\_\_\_\_. In other words it \_\_\_\_\_.
114. The intralaminar nuclei function as part of the limbic system in \_\_\_\_\_.
115. What forms most of the interthalamic adhesion?

### DIENCEPHALON: HYPO, SUB, EPI

116. The hypothalamus forms \_\_\_\_\_ of the third ventricle. It includes the \_\_\_\_\_ and \_\_\_\_\_.
117. How is the hypothalamus divided?
118. The hypothalamus is part of the \_\_\_\_\_ and \_\_\_\_\_, it controls \_\_\_\_\_.
119. What are the eight hypothalamic functions. The following questions will ask for a description of each.
120. How is blood pressure and osmolarity controlled?
121. If the hypothalamus satiety center is lesioned what results? Hunger and thirst centre?
122. The hypothalamus exerts endocrine control upon the \_\_\_\_\_.
123. What neurosecretions are controlled by the hypothalamus and what secretes each?
124. For temperature regulation, the anterior zone does what?
125. For temperature regulation, the posterior zone does what?
126. Sexual behavior and reproduction regulation is achieved by controlling \_\_\_\_\_.
127. Sexually, what 3 things does the hypothalamus regulate?
128. What nucleus is involved in circadian rhythms and daily body temps.
129. The subthalamus serves as the transition zone between the \_\_\_\_\_ and \_\_\_\_\_.
130. The subthalamus contains the \_\_\_\_\_, which is the functional constituent of the \_\_\_\_\_.
131. Lesion of the subthalamus causes \_\_\_\_\_. Describe it.
132. What 5 structures make up the epithalamus?
133. The habenula functions in \_\_\_\_\_ of the limbic system.
134. The posterior commissure connects the \_\_\_\_\_ and functions in \_\_\_\_\_.
135. What two things does the pineal gland secrete? What does each do?
136. Pineal growth results in \_\_\_\_\_. Pineal destruction results in \_\_\_\_\_.



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## CEREBRAL CORTEX

137. How many broadmann areas are there?
138. The precentral gyrus, or area \_\_\_\_, is the primary \_\_\_\_\_ concerned with \_\_\_\_\_.
139. What is the representation of dedicated cortical areas called?
140. The \_\_\_\_\_ refers to the precentral gyrus.
141. The prefrontal cortex is concerned with \_\_\_\_\_, \_\_\_\_\_, and \_\_\_\_\_.
142. Where is broca's area located? Lesion to broca's area causes what?
143. What is the primary auditory cortex?
144. Deep into the lateral fissure is the \_\_\_\_\_ which is concerned with \_\_\_\_\_.
145. The occipitotemporal gyri are the visual association areas concerned with \_\_\_\_\_.
146. Lesion to the occipitotemporal gyri results in \_\_\_\_\_, specifically \_\_\_\_\_.
147. In the temporal, what is concerned with vital function such as feeding/repro and memory?
148. The postcentral gyrus is the \_\_\_\_\_ (areas \_\_, \_\_, \_\_).
149. The area posterior to the postcentral gyrus is the \_\_\_\_\_ area.
150. What is agnosia? What is prosopognosia?
151. The sensory homunculus refers to the \_\_\_\_\_.
152. What does the posterior parietal association areas receive?
153. Lesion of the posterior parietal association areas results in \_\_\_\_\_, \_\_\_\_\_, and \_\_\_\_\_.
154. Where is Wernicke's area?
155. What is astereognosis?
156. What is personal neglect syndrome?
157. What is spatial neglect syndrome?
158. Lesion to Wernicke's area results in \_\_\_\_\_.
159. The occipital lobe contains \_\_\_\_\_ (areas \_\_, \_\_, \_\_).
160. Lesion of the occipital lobe results in \_\_\_\_\_.

## AUTONOMIC NERVOUS SYSTEM

161. The ANS is largely an \_\_\_\_\_ system.
162. Which system has the secondary cell body closer to the CNS? To the tissue?
163. There is no parasympathetic supply to what structures?
164. Sweat glands are \_\_\_\_\_ system innervation.
165. What has nicotinic Ach receptors?
166. What receptors do the sympathetic post ganglion's contain?
167. What receptors do the parasympathetic post ganglion's contain?
168. The ratio of pre to postganglionic fibers is \_\_\_\_:\_\_\_\_ for the sympathetic system.
169. The ratio of pre to postganglionic fibers is \_\_\_\_:\_\_\_\_ for the parasympathetic system.



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170. Autonomic fibers are not specialized so \_\_\_\_\_.
171. In addition to nACh, what do the ganglionic terminals release?
172. What are the noradrenergic receptors?
173. What are the muscarinic receptors?
174. The enteric division has greater \_\_\_\_\_ and mediates \_\_\_\_\_.
175. Autonomic nervous system has both \_\_\_\_\_ and \_\_\_\_\_ fibers.
176. What two things can you find in the ventral root?
177. Where are preganglionic sympathetic cells are located where?
178. Where is there no white rami communicantes?
179. Grey communicantes can be found where?
180. What is the order of transmission in the sympathetic supply of body wall and limbs?
181. What are the other names of the sympathetic chain ganglia?
182. The ventral rami innervate \_\_\_\_\_.
183. The dorsal rami innervate \_\_\_\_\_.
184. What is the order of transmission in the sympathetic supply to head and thoracic viscera?
185. Lesion of the superior cervical ganglion results in what?
186. What is enophthalmos?
187. What is anhydrosis?
188. What is meiosis?
189. What is the order of transmission of sympathetic supply to abdominal and pelvic viscera?
190. What are innervated by the prevertebral ganglia?
191. What are the three prevertebral ganglia?
192. What are the four splanchnic nerves?
193. What is in place for 'maximum' fight of flight?
194. When the prevertebral ganglion is bypassed, what is innervated and released?
195. Where are preganglionic parasympathetic cells found?
196. What are the preganglionic cells in the brainstem? What nerve is each associated with?
197. Edinger Westpal fibers synapse in the \_\_\_\_\_.
198. Sup. Salivatory fibers synapse in the \_\_\_\_\_.
199. Inf. Salivatory fibers synapse in the \_\_\_\_\_.
200. Dorsal motor nucleus fibers synapse in the \_\_\_\_\_.
201. Postganglionic fibers from the ciliary body innervate \_\_\_\_\_ and \_\_\_\_\_.
202. Postganglionic fibers from the pterygopalatine ganglion innervate what?
203. Postganglionic fibers from the submandibular ganglion innervate what?
204. Postganglionic fibers from the otic ganglion innervate what?
205. Postganglionic fibers from the diffuse ganglion innervate what?



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206. Via the \_\_\_\_\_, S2-4 intermediolateral column fibers innervate what?
207. What is the function of the Enteric Nervous System?
208. Enteric sensory neurons respond to \_\_\_\_\_ and \_\_\_\_\_.
209. Enteric sensory neurons innervate to \_\_\_\_\_, \_\_\_\_\_, and \_\_\_\_\_.
210. What plexus' are associated with the ENS, which btw, is highly \_\_\_\_\_.
211. In the ANS sensory, the facial nerve conveys \_\_\_\_\_.
212. In the ANS sensory, the glossopharyngeal conveys \_\_\_\_\_.
213. In the ANS sensory, the vagus conveys \_\_\_\_\_.
214. The sensory info of the VII, IX, and X nerves converge at the \_\_\_\_\_.
215. The solitary nucleus projects where, thus activating the limbic system?
216. Solitary nucleus projections to the \_\_\_\_\_ regulate breathing, BP, HR, etc...
217. Solitary nucleus exerts direct control of \_\_\_\_\_ by a set of \_\_\_\_\_.

## TRIGEMINAL NERVE

218. What are the three trigeminal segments and where is each found?
219. Lesion to the trigeminal ganglion results in what?
220. Lesion to the trigeminal nerve results in what?
221. Lesion to the nucleus of the spinal tract of V nerve?
222. Lesion to the chief sensory nucleus?
223. Lesion to the trigeminal lemniscus below mid pons?
224. Lesion to the trigeminal lemniscus above mid pons?
225. Lesion to the motor nucleus?
226. Don't forget to study the trigeminal drawings in the notes.

