УТВЕРЖДАЮ
Заведующий кафедрой неврологии и нейрохирургии УО «ГрГМУ»
Кулеш С.Д.
26 апреля 2022 г.

Контрольные вопросы к экзамену по неврологии и нейрохирургии для специальности 1 – 79 01 01 «Лечебное дело», 2021/2022 учебный год для студентов ФИУ, обучающихся на английском языке

Exam 2022 Neurology&Neurosurgery

1. Computed tomography of the head (principles, indications and contraindications).
2. Brain and spine MRI (principles, sequences, indications, limitations / contraindications).
3. Conventional skeletal radiographs, myelography, cerebral angiography: indications and diagnostic value.
4. Electroencephalography and evoked potentials (principles, diagnostic capabilities, indications).
5. Electromyography (principles, diagnostic capabilities, indications).
6. Lumbar puncture: indications, contraindications and complications.
7. Lumbar puncture: analysis of results.
8. Ultrasound and histopathologic diagnostics.
9. The anterolateral sensory system
10. The dorsal column-medial lemniscal sensory pathway
11. Sensory disturbances in lesions of peripheral nerve, root and spinal cord.
12. Sensory disturbances in lesions of the brainstem and hemisphere.
13. Pathways of voluntary movements (corticobulbar and pyramidal tracts, lower motor neuron).
14. Deep tendon, periosteal and superficial muscle reflexes. Pathological reflexes (signs).
15. Paralysis: the upper and the lower motor neuron lesions. Neuromuscular transmission and myopathic disorders.
16. Syndromes of motor disorders with damage to the cortex, internal capsule, brain stem, spinal cord, roots and plexuses, peripheral nerves.
17. Morphological and functional organization of the extrapyramidal system.
18. Hypertonic-hypokinetic syndrome (parkinsonism) in extrapyramidal lesions. Tremors.
19. Involuntary movements in extrapyramidal lesions. Dystonias.
20. Cerebellum: structure, connections and functions.
21. Cerebellar syndromes.
22. Functional anatomy of the spinal cord.
23. Complete spinal cord transection syndromes.
24. Incomplete spinal cord syndromes.
25. Functional anatomy of the autonomic nervous system.
26. Horner syndrome. Generalized autonomic dysfunction.
27. Neurogenic bladder.
28. Clinical neuroanatomy and lesions of the olfactory nerve.
29. Clinical neuroanatomy and examination of the optic nerve and visual pathway.
30. Lesions of the optic nerve and visual pathway.
31. Functional anatomy and examination of the ocular motor system (CN III, IV, VI).
32. Disorders of eye movements.

33. Clinical neuroanatomy and examination of the trigeminal nerve.
34. Lesions of the trigeminal nerve.
35. Clinical neuroanatomy and examination of the facial nerve.
36. Lesions of the facial nerve.
37. Clinical neuroanatomy and examination of the vestibulocochlear nerve.
38. Lesions of the vestibulocochlear nerve.
39. Clinical neuroanatomy and lesions of the glossopharyngeal nerve.
40. Clinical neuroanatomy of the vagus nerve.
41. Lesions of the vagus nerve and its branches.
42. Clinical neuroanatomy and lesions of the accessory nerve
43. Clinical neuroanatomy and lesions of the hypoglossal nerve
44. Focal brainstem syndromes.
45. Cross-sectional brainstem syndromes.
46. Clinical neuroanatomy of the cerebral cortex.
47. Behavioral act and the scheme of its organization.
48. Agnosias as perceptual disorders. Visual agnosias.
49. Auditory and tactile agnosias. Disorders of the body image and the spatial perception.
50. Apraxia: definition, classifications and clinical presentation.
51. Aphasia: fundamentals and classifications.
52. Efferent and afferent motor aphasias.
53. Acoustic-gnostic and semantic aphasias.
54. Syndromes of the individual posterior lobes of the cerebral hemispheres.
55. Frontal lobe syndrome.
56. Disorders of consciousness.
57. Bacterial (purulent) meningitis.
58. Tuberculous meningitis. Viral meningitis.
59. Viral encephalitis: etiology and clinical presentation.
60. Viral encephalitis: diagnosis and treatment.
61. Poliomyelitis. Damage of the nervous system in HIV infection.
62. Intracranial abscesses and empyema.
63. Neuroborreliosis. Neurosyphilis.
64. Cysticercosis. Toxoplasmosis.
65. Multiple sclerosis: definition, epidemiology and pathogenesis.
66. Clinical features of multiple sclerosis.
67. Diagnosis of multiple sclerosis.
68. Treatment of multiple sclerosis.
69. Other demyelinating diseases of the central nervous system.
70. Epilepsy: definition, pathogenesis, etiology.
71. Classification of seizure types.
72. Clinical features of epileptic seizures.
73. Diagnosis of epileptic seizures and epilepsy.
74. Basic principles of epilepsy treatment.
75. Multiple seizures or status epilepticus.
76. The blood supply of the brain and spinal cord.
77. Cerebral infarction: definition, classification, pathology and pathogenesis.
78. Conditions associated with focal cerebral ischemia.
79. Clinical presentation of carotid ischemic stroke.
80. Clinical presentation of vertebrobasilar ischemic stroke.
81. Lacunar cerebral infarctions. Transient cerebral ischemic attacks.
82. Diagnosis of ischemic stroke.
83. Treatment of cerebral infarction.
84. Dyscirculatory (vascular) encephalopathy.

85. Non-traumatic intracerebral hemorrhage (ICH): definition, pathology, etiology and pathogenesis.
86. Clinical manifestations in ICH.
87. Diagnosis of ICH. Secondary intracerebral hemorrhage.
88. Treatment of ICH.
89. Non-traumatic subarachnoid hemorrhage (SAH): definition, pathology, etiology and pathogenesis.
90. Clinical manifestations in SAH.
91. Diagnosis of SAH.
92. Treatment of SAH.
93. Vascular myelopathies.
94. Trigeminal neuralgia.
95. Facial nerve paralysis.
96. Diseases of the brachial plexus.
97. Mononeuropathies. Entrapment neuropathies.
98. Acute posterior ganglionitis (herpes zoster).
99. Polyradiculopathy and polyneuropathy. Fundamentals.
100. Hereditary motor and sensory neuropathy.
101. Inflammatory polyneuropathies. Guillain-Barre syndrome.
102. Chronic inflammatory demyelinating polyneuropathy.
103. Polyneuropathy due to a metabolic disorder.
104. Polyneuropathy due to exogenous toxic substances.
105. Polyneuropathy due to dysproteinemia or paraproteinemia.
106. Classification of vertebrogenic lesions of the peripheral nervous system.
107. Functional spinal unit and its changes in the degenerative spine.
108. Dorsalgia and associated pain disorders: definitions, pathophysiology, and clinical presentation.
109. Diagnosis and treatment of dorsalgia.
110. Cervical radicular syndromes.
111. Degenerative cervical myelopathy.
112. Lumbosacral radicular syndromes.
113. Lumbar spinal stenosis.
114. Huntington's disease.
115. Hereditary ataxias.
116. Hereditary spastic paraplegia.
117. Spinal muscular atrophies.
118. Motor neuron disease.
119. Parkinson's disease. Secondary parkinsonism.
120. Wilson's disease.
121. Myasthenia gravis.
122. Muscular dystrophies.
123. Myotonic disorders.
124. Basic principles of neurosurgical operations.
125. Neurosurgery technique.
126. Lumbar disc herniation: neurosurgical treatment.
127. Lumbar spinal stenosis: neurosurgical treatment.
128. Surgical treatment of traumatic injuries of peripheral nerves.
129. Intracranial aneurysms: neurosurgical treatment.
130. Arteriovenous malformation: neurosurgical treatment.
131. Carotid-cavernous fistula.
132. Surgical treatment of non-traumatic intracerebral hemorrhages.
133. Brain abscesses: neurosurgical treatment.

134. Classification of head injuries.
135. The Glasgow coma scale.
136. Neurological examination in TBI.
137. Mild brain injury.
138. Cerebral contusion.
139. Diffuse axonal injury.
140. Epidural hematoma.
141. Subdural hematomas.
142. Traumatic intracerebral hemorrhage.
143. Skull fractures.
144. Penetrating trauma.
145. Spinal cord injury.
146. Classification of brain tumors.
147. Glial tumors.
148. Meningioma.
149. Sellar tumors.
150. Craniopharyngioma.
151. Posterior fossa tumors.
152. Metastatic brain tumors.
153. Spinal cord tumors.