

QUESTIONS
for the exam in nervous and neurosurgical diseases
for 4th year students of the Faculty of General Medicine for English speaking
groups

1. Higher cortical functions: localization and its disorders (aphasia, apraxia, agnosia).
2. Clinical neuroanatomy of pathways conducting superficial types of sensitivity.
3. Clinical neuroanatomy of pathways conducting deep types of sensitivity
4. Types of sensitivity disorders.
5. Clinical neuroanatomy of pathways regulating voluntary movements (pyramidal tract). Disorder syndromes at different levels.
6. Reflexes: types, structure of the reflex arc. Pathological reflexes: types, examination methods.
7. Central (spastic) and peripheral (flaccid) palsy: causes, clinical manifestations.
8. Clinical neuroanatomy of the spinal cord. Syndromes of lesions of the anterior, posterior, lateral horns and white commissure of the spinal cord.
9. Clinical neuroanatomy of the spinal cord. Lesion of the lateral and posterior white columns of the spinal cord, Brown-Séguard syndrome.
10. Clinical neuroanatomy of the spinal cord. Symptoms of the upper and lower cervical spinal cord injuries.
11. Clinical neuroanatomy of the speech centers of the brain. Aphasia: classification, clinical manifestations.
12. Clinical neuroanatomy of the spinal cord. Syndromes of the lumbosacral spinal cord lesions and cauda equine lesions.
13. Olfactory nerve: clinical neuroanatomy, examination methods, lesion symptoms.
14. Optic nerve: clinical neuroanatomy, examination methods, lesion symptoms.
15. Oculomotor nerve: clinical neuroanatomy, examination methods, damage symptoms.
16. Vegetative innervation of the eye and its disorders. Horner's syndrome.
17. Trigeminal nerve: clinical neuroanatomy, examination methods, damage symptoms.
18. Facial nerve: clinical neuroanatomy, lesion syndromes at different levels, examination methods.
19. Clinical neuroanatomy of the spinal cord. Syndrome of half spinal cord damage at different (cervical, thoracic, lumbar) levels.

20. Glossopharyngeal and vagus nerves: clinical neuroanatomy, examination methods, damage symptoms. Bulbar and pseudobulbar palsy (syndromes), criteria for differential diagnosis.
21. Accessory and hypoglossal nerves: clinical neuroanatomy, examination methods, damage symptoms.
22. Vestibulocochlear nerve: clinical neuroanatomy, examination methods, damage symptoms.
23. Clinical neuroanatomy of the brain stem, diagnostic significance of the main alternating (crossing) syndromes.
24. Clinical neuroanatomy of the efferent cerebellum pathways. Symptoms of the cerebellar lesions.
25. Clinical neuroanatomy of the cerebellum afferent pathways. Symptoms of the cerebellar damages.
26. Clinical neuroanatomy of the cerebellum. The main syndromes of damage.
27. Clinical neuroanatomy and syndromes of the extrapyramidal system damages.
28. Frontal lobe of the brain and syndromes of its damage.
29. Parietal lobe of the brain and syndromes of its damage.
30. The temporal lobe of the brain and the syndromes of its damage.
31. The occipital lobe of the brain and the syndromes of its damage.
32. The structure and functions of the autonomic nervous system. The central and peripheral types of urination disorder.
33. Syndromes of the inner capsule and thalamus damage.
34. Cerebrospinal fluid: secretion, circulation, functions, indicators of clinical and laboratory tests. The main liquorological syndromes.
35. Clinical neuroanatomy of superficial sensory pathways.
36. Abducens nerve: clinical neuroanatomy, examination methods, damage symptoms.
37. Clinical neuroanatomy of afferent (sensory) pathways. Types of sensitivity disorders.
38. Reflexes: classification, structure of the reflex arc. Superficial and deep reflexes (levels of closure, examination methods).
39. Clinical neuroanatomy of pathways regulating voluntary movements (pyramidal tract). Central (spastic) and peripheral (flaccid) palsy (paralysis): causes, clinical signs. Disorder syndromes at different levels.
40. Clinical neuroanatomy of the spinal cord. Syndromes of damage of the anterior, posterior, lateral horns and white commissure of the spinal cord.
41. Hyperkinesias. Classification, clinical manifestations, differential diagnosis and principles of therapy.

42. Radiological semiotics of degenerative-dystrophic diseases of the spine - spinal osteochondrosis (spondylosis, spondylolysis, spondylolisthesis).
43. Types (classification) of cerebral circulation disorders.
44. Lumbar puncture: performing technique, indications and contraindications. Complications of lumbar puncture.
45. Types (classification) of risk factors for acute cerebrovascular disorders. Stroke prevention.
46. Meningeal syndrome: etiology, clinical manifestations.
47. Non-traumatic subarachnoid hemorrhage: etiopathogenesis, clinical manifestations, diagnosis, treatment.
48. Basic therapy of acute cerebral circulation disorders.
49. Epidemic cerebrospinal bacterial meningitis (meningococcal): etiology, clinical manifestations, diagnosis and treatment.
50. Acute spinal circulation disorder: clinical manifestations, diagnosis and treatment.
51. Ischemic stroke: etiology, pathogenesis, clinical manifestations, diagnosis and treatment.
52. Secondary bacterial meningitis: etiology, pathogenesis, clinical manifestations, diagnosis, principles of therapy.
53. Chronic insufficiency of cerebral circulation (dyscirculatory encephalopathy). Clinical manifestations (stages), diagnosis and principles of therapy.
54. Differential diagnosis of meningitis based on the analysis of cerebrospinal fluid.
55. Tick-borne encephalitis: etiology, clinical manifestations, diagnosis, principles of therapy.
56. Differentiated therapy of acute cerebral circulation disorders (ischemic stroke and intracerebral hemorrhage).
57. Syndrome of intracranial hypertension: etiology, pathogenesis, clinical manifestations.
58. Myasthenia gravis: etiology, pathogenesis, clinical manifestations, diagnostic tests, principles of therapy. Emergency treatment for myasthenic crisis.
59. Neuroborreliosis (Lyme disease): etiology, clinical manifestations, diagnosis, principles of therapy.
60. Differential diagnosis of cerebral infarction, intracerebral hemorrhage and non-traumatic subarachnoid hemorrhage.

61. Acute disseminated encephalomyelitis: etiology, pathogenesis, clinical manifestations, diagnosis, principles of therapy.
62. Status epilepticus: clinical manifestations, diagnosis, emergency care for epileptic seizures and status epilepticus.
63. Hyperkinesias. Classification, clinical manifestations, differential diagnosis and principles of therapy.
64. Epilepsy: etiology, pathogenesis, classification.
65. Acute myelitis: etiology, clinical manifestations, diagnosis, differential diagnosis, principles of therapy.
66. Sciatic nerve neuropathy: clinical manifestations, diagnosis, treatment.
67. Electroencephalography: indications for prescription, results interpretation.
68. Multiple sclerosis: clinical manifestations, diagnosis, treatment of exacerbation and Disease Modifying Therapies (DMT).
69. Neurological manifestations of degenerative-dystrophic diseases of the cervical spine: classification, clinical signs, diagnosis, treatment and prevention.
70. Craniography, indications for investigation. X-ray semiotics of intracranial hypertension syndrome.
71. The trigeminal neuralgia: clinical manifestations, diagnosis, differential diagnosis, principles of therapy.
72. Types (classification) of meningitis. Meningeal syndrome.
73. Syringomyelia. Etiology, clinical manifestations, diagnosis, principles of therapy.
74. The brachial plexus lower primary bundle injury - Dejerine-Klumpke (Klumpke's) palsy: clinical signs, diagnosis, treatment.
75. Intracerebral hemorrhages: etiology, pathogenesis, clinical manifestations, diagnosis, principles of therapy.
76. Charcot-Marie-Tooth disease: clinical signs, DNA test, differential diagnosis, principles of therapy.
77. Facial nerve neuropathy: clinical manifestations, diagnosis, differential diagnosis, treatment.
78. Progressive muscular dystrophies (PMD): classification. Duchenne and Becker muscular dystrophy: clinical manifestations and principles of therapy.
79. Dementia: classification, etiology, pathogenesis. Alzheimer's disease: clinical manifestations, diagnosis, treatment.
80. Hepatolenticular degeneration (Wilson's disease). Etiology, pathogenesis, clinical types, diagnosis, principles of therapy.

81. Huntington's disease: etiology, pathogenesis, clinical manifestations, diagnosis, principles of therapy.
82. Tension headache: etiology, pathogenesis, clinical signs, diagnosis, differential diagnosis, treatment, prevention.
83. Hereditary spastic paraplegia (Strumpell disease). Isolated (uncomplicated) hereditary spastic paraplegia and paraplegia "plus" (complicated hereditary spastic paraplegia): clinical manifestations, diagnostics, principles of therapy.
84. Differential diagnosis of reflex (pre-radicular) and radicular syndromes of the spine degenerative-dystrophic diseases (spine osteochondrosis).
85. Radial nerve neuropathy: clinical manifestations, diagnosis, principles of therapy.
86. Neurological signs of the cervical spine degenerative-dystrophic diseases (cervical osteochondrosis): classification, clinical signs manifestations, diagnosis, treatment and prevention.
87. Parkinson's disease: etiology, pathogenesis, clinical manifestations, diagnosis, stages by Hen-Yar, principles of therapy.
88. Diagnostic value of neurovisualization (Computerized Tomography and Magnetic Resonance Imaging), indications and contraindications.
89. Friedreich's ataxia: DNA diagnosis, clinical signs, principles of therapy.
90. Neurological manifestations of lumbar spine degenerative-dystrophic diseases (lumbar osteochondrosis). Classification, clinical signs, diagnosis, treatment and prevention.
91. Migraine. Etiology, pathogenesis, classification, clinical manifestations, diagnosis, differential diagnosis, principles of therapy, prevention.
92. Neuropathy of the peroneal and tibial nerves: etiology, clinical signs, diagnosis, principles of therapy.
93. Motor neuron disease: amyotrophic lateral sclerosis. Clinical signs, diagnosis, differential diagnosis, principles of therapy.
94. Cluster headache. Clinical signs, diagnosis, differential diagnosis, principles of therapy.
95. Multiple sclerosis: epidemiology, etiology, pathogenesis, classification.
96. Damage to the superior primary trunk of the brachial plexus - Duchenne-Erb palsy. Clinical signs, diagnosis, principles of therapy.
97. Focal (partial) and generalized seizures: clinical manifestations, diagnosis, differential diagnosis, first aid, principles of therapy.
98. Encephalitis: classification, main clinical syndromes.

99. Tuberculous meningitis. Features of the clinical course, diagnostic methods and differential diagnosis, principles of therapy.
100. Femoral nerve neuropathy. Clinical signs, diagnosis, treatment.
101. Basic therapy for acute cerebral circulation disorders.
102. Charcot-Marie-Tooth disease. Classification, DNA diagnosis, clinical signs, differential diagnosis, principles of therapy.
103. Ischemic stroke (brain infarction): etiology, pathogenesis, clinical signs, diagnosis, differential diagnosis, treatments, prevention.
104. Friedreich's ataxia. DNA diagnosis, clinical signs, differential diagnosis, principles of therapy.
105. Transient ischemic attack (transient cerebrovascular disorder): clinical relevance, etiology, pathogenesis, clinical signs, diagnosis, differential diagnosis and principles of therapy.
106. Diabetic and alcoholic polyneuropathy: pathogenesis, clinical signs, diagnosis and principles of therapy.
107. Dementia: classification, etiology, pathogenesis. Alzheimer's disease: clinical manifestations, diagnosis and principles of therapy.
108. The main neurological manifestations of type 1 and type 2 neurofibromatosis: diagnostic criteria, differential diagnosis, principles of therapy.
109. Spinal amyotrophies. The main methods of diagnosis of neuromuscular diseases, principles of therapy.
110. Guillain-Barré syndrome: etiology, pathogenesis, clinical signs, diagnosis, principles of therapy.
111. Herpetic encephalitis: etiology, pathogenesis, clinical signs, diagnosis, principles of therapy.
112. Tension headache. Etiology, pathogenesis, clinical manifestations, diagnosis, differential diagnosis, principles of therapy, prevention.
113. Ischemic stroke (cerebral infarction): etiology, pathogenesis, clinical signs, diagnosis, differential diagnosis, principles of therapy and prevention.
114. Clinical manifestations of systemic and non-systemic dizziness, principles of therapy.
115. Bunch (cluster) headache. Clinical signs, diagnosis, differential diagnosis, principles of therapy.
116. NeuroAIDS. Clinical relevance of damage of the nervous system.
117. Neuropathy of the ulnar nerve. Clinical signs, diagnosis, principles of therapy.
118. Neurosyphilis: clinical relevance, diagnosis and principles of therapy.

119. Facial pain: classification, diagnosis, principles of therapy.
120. Basic therapy for acute disorders of cerebral circulation (ischemic stroke and intracerebral hemorrhage).
121. Types (classification) of traumatic brain injuries.
122. Open traumatic brain injury of moderate severity: clinical manifestations, diagnosis, treatment.
123. Closed moderate traumatic brain injury: clinical manifestations, diagnosis, treatment.
124. Traumatic brain injuries in elderly patients: peculiarities of clinical manifestations and diagnosis.
125. Brain contusions: classification, clinical manifestations, diagnosis and treatment
126. Cerebral compression syndrome in traumatic brain injuries: etiology, clinical manifestations, diagnosis, principles of therapy.
127. Hydrocephalus: etiology, classification, pathogenesis, clinical manifestations, diagnosis, principles of therapy.
128. Rhino- and otoliquorrhea: etiology, pathogenesis, clinical manifestations, diagnosis, principles of therapy.
129. Traumatic and spontaneous intracerebral hematomas: clinical manifestations, indications and principles of surgical treatment.
130. Occlusive crises. Etiopathogenesis, clinical manifestations, diagnosis, principles of therapy.
131. Mild traumatic brain injury: clinical manifestations, diagnosis, treatment principles of therapy.
132. Indications, contraindications and principles of cerebral infarction and intracerebral hemorrhage surgical treatment.
133. Cerebral angiography: indications, contraindications, execution technique.
134. Traumatic and spontaneous intracerebral hematomas: clinical manifestations, surgical treatment.
135. Neuroectodermal brain tumor: clinical manifestations, treatment.
136. Depressed fractures of the skull: clinical manifestations, principles of therapy.
137. Gunshot wounds of the head: clinical signs, diagnosis and principles of therapy.
138. Skull base fractures: clinical signs, diagnosis, principles of therapy.
139. Brain meningiomas: classification, clinical manifestations, diagnosis and treatment.

140. Epidural hematomas: clinical manifestations, diagnosis, treatment.
141. Subdural hematomas: clinical manifestations, diagnosis, treatment.
142. Vestibulocochlear nerve schwannoma: clinical signs, diagnosis, treatment.
143. Aneurysmal subarachnoid hemorrhage: clinical manifestations, periodization, Hunt-Hess scale, diagnosis, treatment principles of therapy.
144. Metastatic brain tumors: etiology, clinical manifestations, differential diagnosis, principles of therapy.
145. Diffuse axonal brain injury: biomechanics of damage, pathogenesis, clinical manifestations, diagnosis, and principles of therapy.
146. Arterial (saccular) aneurysms of the brain: classification, periods (stages) of the disease, clinical signs, diagnosis, principles of therapy.
147. Arteriovenous aneurysms (malformations) of the brain. Classification, periods, clinical manifestations, diagnosis, principles of therapy.
148. Brain abscesses: etiology, clinical manifestations, differential diagnosis and principles of therapy.
149. Brain meningiomas: classification, diagnosis, principles of therapy.
150. Clinical and pathomorphological classification of brain tumors.
151. Severe traumatic brain injury. Clinical signs, diagnosis, principles of therapy.
152. Tumors of the pituitary-hypothalamic region: classification, clinical manifestations, diagnosis, treatment principles of therapy.
153. Pituitary adenomas: classification, clinical signs, diagnosis; indications and methods of surgical treatment.
154. Classification of traumatic brain injuries.
155. Moderate open traumatic brain injury: clinical signs, diagnosis, treatment.
156. Moderate closed traumatic brain injury: clinical signs, diagnosis, principles of therapy.
157. Traumatic brain injuries in elderly patients: peculiarities of clinical manifestations and diagnosis.
158. Traumatic compression of the brain: etiology, clinical signs, diagnosis, principles of therapy.
159. Hydrocephalus: etiology, classification, pathogenesis, clinical signs, diagnosis, treatment.
160. Rhino- and otoliquorrhea: etiology, pathogenesis, clinical signs, diagnosis, principles of therapy.