

## SOMATIC INNERVATION

1. Facial muscles, innervation.
2. Temporomandibular joint, muscles related to this joint, innervation.
3. Muscles of the neck, innervation.
4. Deep muscles of the back, innervation.
5. Superficial muscles of the back, innervation.
6. Muscles of the abdomen, innervation.
7. Muscles involved in respiration, innervation.
8. The shoulder joint, muscles related to this joint, innervation.
9. The elbow joint, muscles related to this joint, innervation.
10. The wrist joint, muscles related to this joint, innervation.
11. Joints of the hand, muscles related to these joints, innervation.
12. The hip joint, muscles related to this joint, innervation.
13. The knee joint, muscles related to this joint, innervation.
14. The ankle joint, muscles related to this joint, innervation.
15. Joints of the foot, muscles related to these joints, innervation.

## INNERVATION OF THE VISCERA

1. The oral cavity, hard and soft palate, muscles of the soft palate, tonsils, innervation.
2. The teeth, innervation.
3. Intrinsic and extrinsic muscles of the tongue, innervation.
4. The pharynx, innervation.
5. The esophagus, innervation.
6. The stomach, innervation.
7. The small intestine, innervation.
8. The large intestine, innervation.
9. The liver, the gallbladder, innervation.
10. The nose, innervation.
11. The larynx, innervation.
12. The trachea, the bronchi, the lungs, the pleura, innervation.
13. The kidney, the ureter, innervation.
14. The urinary bladder, the urethra, innervation.
15. The penis, innervation.
16. The testis, innervation.
17. The female external genitalia, innervation.
18. The vagina, the uterus, the uterine tube, the ovary, innervation.
19. Innervation of the heart. Conducting system of the heart.
20. Vessels of the greater, lesser and cardiac circulation, innervation.

## CENTRAL NERVOUS SYSTEM

1. Main stages of development of the central nervous system. Brain vesicles and their derivatives.
2. Spinal cord. Function, topography, structure. Spinal meninges. Simple reflex arch.

3. Sulci and gyri of superolateral surface of the cerebral hemisphere. Cortical zones in this area.
4. Sulci and gyri of medial surface of the cerebral hemisphere. Cortical zones in this area.
5. Sulci and gyri of inferior surface of the cerebral hemisphere.
6. The projection fibres of telencephalon
7. Association areas of telencephalon
8. Associative and commissural fibers of the cerebrum and spinal cord.
9. Internal structure of the cerebral hemisphere. Basal (subcortical) nuclei.
10. Internal structure of the cerebral hemisphere. Internal capsule, topography of the pathways within internal capsule.
11. Diencephalon, its structure. Thalamus, epithalamus, metathalamus. Subthalamus (ventral thalamus): mammillary body, tuber cinereum, hypophysis, optic tract. Third ventricle, its walls.
12. Endocrine glands: posterior lobe of hypophysis, epiphysis. Topography, structure, functions.
13. Rhinencephalon. The limbic system.
14. Brainstem, subdivisions, functions. Reticular formation. Nuclei of the reticular formation.
15. Midbrain, its structures. Topography of white matter and nuclei.
16. Metencephalon, subdivision. Cerebellum.
17. Metencephalon, subdivision. Pons.
18. Medulla oblongata (myelencephalon), structure. Grey and white matter topography.
19. Ventricular system of the brain. Contents, connections, communications with subarachnoid space. Origin and outflow of cerebrospinal fluid.
20. The fourth ventricle. Structure and communications.
21. The lateral ventricles. Structure, parts, boundaries and communications.
22. The third ventricle. Structure, boundaries and communications.
23. The meninges of the brain and spinal cord. Epidural, subdural and subarachnoid spaces.
24. The sinuses of the dura mater. Structure, function.
25. Pathways for conscious proprioceptive impulses. Lesions at 55 different levels.
26. Pathways for unconscious proprioceptive impulses. Lesions at different levels.
27. Pyramidal pathways, corticonuclear pathway. Lesions at different levels.
28. Pyramidal pathways, corticospinal pathway. Lesions at different levels.
29. Extraparamidal pathways.
30. Blood supply for the brain (arteries, veins, sinuses of dura mater)

## PERIPHERAL NERVOUS SYSTEM

1. Visual organ: general structure, eyeball and accessory visual structures.
2. Origin and outflow of aqueous humor. Accommodation, mechanism of accommodation.
3. Pathways of the pupillary reflex and the corneal reflex.
4. Extraocular muscles. Function, blood supply and innervation.
5. Lacrimal apparatus and its components. Blood supply and innervation of the lacrimal gland.
6. External and middle ear: parts, connections, blood supply and innervation.
7. Inner ear: parts, function, structure. Blood supply of the inner ear.

8. Gustatory and olfactory organs. Structure, topography, blood supply and innervation.
9. Trunk skin innervation. Skin glands innervation.
10. Upper limb skin innervation. Skin glands innervation.
11. Lower limb skin innervation. Skin glands innervation.
12. Head and neck skin innervation. Skin glands innervation.
13. Perineum skin and muscles innervation.
14. 1<sup>st</sup> pair of cranial nerves. Pathway of olfactory analyzer.
15. 2<sup>nd</sup> pair of cranial nerves, formation, topography. Pathways of visual analyzer. Clinical symptoms of lesions at different levels.
16. 3<sup>rd</sup>, 4<sup>th</sup> and 6<sup>th</sup> pairs of cranial nerves, formation, topography, branches, areas of innervation. Ciliary ganglion.
17. 5<sup>th</sup> pair of cranial nerves, formation, topography, branches, areas of innervation.
18. Ophthalmic division of the trigeminal nerve (V1), formation, branches, areas of innervation.
19. Mandibular division of the trigeminal nerve (V3). Its formation, branches, areas of innervation.
20. Maxillary division of the trigeminal nerve (V2). Its formation, branches, areas of innervation.
21. 7<sup>th</sup> pair of cranial nerves. Formation, topography, branches, areas of innervation. The pterygopalatine ganglion. Submandibular ganglion. Clinical relevance of the facial nerve topography.
22. 8<sup>th</sup> pair of cranial nerves. Its components, their formation. Pathways of the acoustic and vestibular analyzers.
23. 9<sup>th</sup> pair of cranial nerves. Formation, branches, areas of innervation. Auricular ganglion.
24. 10<sup>th</sup> pair of cranial nerves. Formation, structure and features of the nerve fibers. Recurrent sensory fibers, formation, topography, areas of innervation.
25. 11<sup>th</sup> pair of cranial nerves. Formation, topography, branches, areas of innervation.
26. 12<sup>th</sup> pair of cranial nerves. Formation, topography, branches, areas of innervation.
27. Projection of cranial nerves nuclei on the rhomboid fossa.
28. Spinal nerves. Formation, ganglions, roots, branches, plexuses.
29. Posterior branches of spinal nerves. Formation, topography, areas of innervation.
30. Cervical plexus. Formation, topography, branches, areas of innervation.
31. Brachial plexus. Formation, topography, branches, areas of innervation.
32. Thoracic spinal nerves. Formation, branches, topography, areas of innervation.
33. Lumbar plexus. Formation, branches, topography, areas of innervation.
34. Sacral plexus. Formation, branches, topography, areas of innervation.
35. Autonomic (vegetative) nervous system. Definition, structure and divisions.
36. Sympathetic division of autonomic nervous system. Central and peripheral parts. Celiac plexus, formation, ganglions.
37. Sacral part of parasympathetic nervous system. Central and peripheral divisions. Inferior hypogastric (pelvic) plexus.
38. Suprarenal gland. Stress hormones and their effects.