ONE OF RULES OF SURGERY IS THE REALIZATION OF SECTIONS ALONG THE LINES OF LANGER (LINE OF A TENSION OF A SKIN). WHAT TISSUE FORMS A RETICULAR LAYER OF A DERMIS?

DENSE IRREGULAR CONNECTIVE

RETICULAR CONNECTIVE

LOOSE FIBROUS CONNECTIVE

**EPITHELIAL** 

**DENSE REGULAR CONNECTIVE** 

ON A SLIDE OF A RED BONE MARROW THE NUMEROUS CAPILLARIES ARE VISIBLE, THROUGH WHICH WALL BLOOD CELLS ENTER A BLOOD. TO WHAT TYPE THE CAPILLARIES CONCERN?

**SINUSOIDAL** 

LYMPHATIC

**FENESTRATED** 

SOMATIC

**VISCERAL** 

TUNICA INTIMA OF VESSELS IMPREGNATED BY SALTS OF SILVER, OWING TO WHAT THE CELLS WITH ROUGH, IRREGULAR EDGES ARE REVEALED. NAME THESE CELLS.

**ENDOTHELIOCYTES** 

STELLATE CELLS

**MYOCYTES** 

**FIBROBLASTS** 

**ADIPOCYTES** 

IN A WALL OF BLOOD VESSELS AND WALL OF HEART SOME TUNICS ARE DISTINGUISHED. WHAT TUNIC OF HEART IS SIMILAR TO A WALL OF VESSELS BY A HISTOGENESIS AND STRUCTURE?

**ENDOCARDIUM** 

**MYOCARDIUM** 

**PERICARDIUM** 

**EPICARDIUM** 

EPICARDIUM AND MYOCARDIUM

THE ORGAN OF CARDIOVASCULAR SYSTEM CONTAINS CELLS CONNECTING BY INTERCALATED DISKS. WHAT ORGAN IS IT?

**HEART** 

MUSCULAR VIEN

ARTERIOLE

MUSCULAR ARTERY

AORTA

ON A SLIDE THE ORGAN OF CARDIOVASCULAR SYSTEM IS VISIBLE. ONE OF ITS TUNICS IS FORMED BY ANASTOMOSING FIBERS. THEY ARE CONSTRUCTED FROM CELLS CONNECTING WITH INTERCALATED DISKS. WHAT ORGAN OF CARDIOVASCULAR SYSTEM IS IT?

**HEART** 

**ELASTIC ARTERY** 

**MUSCULAR VEIN** 

MUSCULAR ARTERY

**ARTERIOLE** 

THE PRESENCE OF FENESTRATED EPITHELIUM AND PUNCHED BASAL MEMBRANE IS CHARACTERISTIC FOR A CAPILLARY. NAME THE TYPE OF CAPILLARY.

**SINUSOIDAL** 

**VISCERAL** 

**SOMATIC** 

LYMPHATIC

**LACUNAR** 

THE WALLS OF VESSELS HAVE MORPHOLOGICAL DIFFERENCES IN A STRUCTURE OF TUNICA MEDIA. WHAT PROVIDES THESE DIFFERENCES?

HEMODYNAMIC CONDITIONS
HIGH CONTENTS OF CATECHOLAMINS IN A BLOOD

INFLUENCE OF ENDOCRINE SYSTEM ORGANS

**REGULATION FROM A CNS** 

INDUCTIVE INFLUENCE OF NEURONES OF VEGETATIVE GANGLIA

THE ARTERIES OF LARGE CALIBRE DURING A SYSTOLE ARE DILATED AND COME BACK IN AN INITIAL POSITION DURING A DIASTOLE, PROVIDING STABILITY OF BLOOD STREAM. PRESENCE OF WHAT ELEMENTS IN A WALL OF THEM PROVIDES

THIS STABILITY?

**ELASTIC FIBERS** 

**MUSCULAR FIBERS** 

**RETICULAR FIBERS** 

**COLLAGEN FIBERS** 

**FIBROBLASTS** 

TUNICA INTIMA OF BLOOD VESSELS IS LINED BY AN EPITHELIUM. NAME IT.

**ENDOTHELIUM** 

PSEUDOSTRATIFIED EPITHELIUM

MESOTHELIUM

**EPIDERMIS** 

TRANSITIONAL EPITHELIUM

AT NEWBORN THE INFRINGEMENT OF A MYOCARDIUM DEVELOPMENT IS DIAGNOSED. DISTURBANCE OF WHAT EMBRYONIC SOURCE TAKES PLACE?

MYOEPICARDIAL PLATE

**MESENCHYME** 

**SPLANCHNOPLEURA** 

**ENTODERM** 

**ECTODERM** 

ON A TISSUE SPECIMEN OF A WALL OF HEART BETWEEN AN ENDOCARDIUM AND MYOCARDIUM THE LARGE CELLS WITH LIGHT CYTOPLASM AND ECCENTRICALLY POSED NUCLEUS ARE DEFINED. WHAT CELLS OF HEART HAVE THESE MORPHOLOGICAL ATTRIBUTES?

CELLS OF PURKINJE FIBERS

**LIPOCYTES** 

PACEMAKER CELLS

TYPICAL CARDIOMYOCYTES

**ENDOCRINE CELLS** 

THE PATIENT HAS A HEART ATTACK. WHAT MORPHOLOGICAL COMPONENTS PROVIDES NEOGENESIS OF A CARDIAC WALL?

**CONNECTIVE TISSUE** 

INTRACELLULAR NEOGENESIS OF CARDIOMYOCYTES

PROLIFERATION OF CONTRUCTIVE MYOCYTES

PROLIFERATION OF CONDUCTING CARDIOMYOCYTES

PROLIFERATION OF CONTRACTIVE AND CONDUCTING CARDIOOMYOCYTES

IN THE WALL OF A VESSEL THE INTERNAL AND EXTERNAL ELASTIC MEMBRANES AND A PLENTY OF MYOCYTES IN TUNICA MEDIA ARE VISIBLE. WHAT VESSEL IS IT?

ARTERY OF A MUSCULAR TYPE

ARTERY OF ELASTIC TYPE

ARTERY OF THE MIXED TYPE

VEIN WITH STRONG DEVELOPMENT OF MUSCLES

LYMPHATIC VESSEL

ON A TISSUE SPECIMEN HAVE REVEALED BLIND ENDING VESSELS, LOOK LIKE FLATTENED ENDOTHELIAL TUBES, DO NOT CONTAIN A BASAL MEMBRANE AND PERICYTES, THE ENDOTHELIUM OF THESE VESSELS IS FIXED BY COLLAGEN FIBERS. WHAT VESSELS ARE THEY?

LYMPHATIC CAPILLARIES BLOOD CAPILLARIES ARTERIOLE

VENULES

ARTERIO-VENULAR ANASTOMOSES

ON A SLIDE THE NETWORK OF CAPILLARIES POSED BETWEEN TWO ARTERIOLES (RETE MIRABILE) IS WELL VISIBLE. IN WHAT ORGAN IS IT POSSIBLE TO SEE THIS FENOMENON?

IN A KIDNEY

IN A RETINA OF AN EYE

**IN A LIVER** 

**IN ADRENAL** 

**IN A SPLEEN** 

ON A SLIDE OF A HEART THE LIGHT ORGANIZED IN CORDS CELLS, CONTAINING SMALL AMOUNT OF MYOFIBRILS, INCLUSIONS OF A GLYCOGEN AND ECCENTRICALLY POSED NUCLEI ARE DISTINGUISHED. WHAT ARE THESE CELLS?

CELLS OF PURKINJE FIBERS

CONDUCTING PACEMAKER

**CONDUCTING TRANSITIVE** 

**ENDOCRINE** 

**CONTRACTILE** 

ON AN ELECTRON MICROPHOTOGRAPH OF SKIN EPIDERMIS AMONG CUBOIDAL CELLS ARE LOCATED BRANCHING CELLS, IN HAS CYTOPLASM OF WHICH FOUND WELL ADVANCED GOLGI APPARATUS, A LOT OF RIBOSOMES AND MELANOSOMES. NAME THESE BRANCHING CELLS.

**MELANOCYTES** 

KERATINOCYTES

LANGERHANS CELLS

MERKEL CELLS

TISSUE BASOPHILS

IN A DERMIS OF A SKIN THE VESSELS ARE FOUND OUT, WITH A THICK LAYER OF SMOOTH MUSCLE CELLS IN TUNICA MEDIA. NAME THESE VESSELS.

ARTERY OF A MUSCULAR TYPE

**ARTERIOLE** 

**CAPILLARIES** 

**VENULES** 

ARTERIOLO-VENULAR ANASTOMOSES

THE SECRETORY UNITS OF APOCRINE SWEAT GLANDS OF A SKIN CONTAIN MYOEPITHELIAL CELLS. WHAT IS THE FUNCTION OF THESE CELLS?

CONTRACTILE

**PROTECTIVE** 

**SECRETORY** 

REGENERATIVE

**SUPPORTIVE** 

IN POLICLINICS HAS ADDRESSED THE PATIENT WITH OPEN FRACTURE OF A FINGER. THE FIRST MEDICAL CARE IS GIVEN. WHAT SKIN STRUCTURE FROM INJURED REGENERATES FASTER THAN OTHERS?

**EPIDERMIS** 

**NERVOUS TISSUE** 

**CONNECTIVE TISSUE** 

**SMOOTH MUSCLE** 

**BONE** 

AT THE PATIENT OF 12 YEARS ON A SKIN ARE FOUND OUT WHITE MACULAE WITHOUT A PIGMENT. ABSENCE OF WHAT CELLS OF A SKIN HAS RESULTED IN OCCURRENCE OF SUCH FORMATIONS?

MELANOCYTES

PLASMOCYTES ADIPOCYTES

**FIBROCYTES** 

**MAST CELLS** 

AT RESEARCH OF A SLIDE OF A CHILD FINGER SKIN WAS REVEALED, THAT THE EPIDERMIS IS NOT FULLY DEVELOPED. WHAT GERM LAYER WAS DAMAGED DURING DEVELOPMENT?

**ECTODERM** 

**ENDODERM** 

**MESODERM** 

**NEUROECTODERM** 

**MESENCHYME** 

IDENTIFICATION OF THE PERSON IS USED IN CRAMINAL PRACTICE. WHAT STRUCTURE DETERMINES AN INDIVIDUAL

PICTURE OF A SKIN.

PAPILLARY LAYER OF A DERMIS

RETICULAR LAYER OF A DERMIS

**EPIDERMIS** 

**EPIDERMIS AND DERMIS** 

EPIDERMIS, DERMIS AND HYPODERMIS

AT FALL THE CHILD HAS TORN OFF A SKIN OF A PALM. WHAT EPITHELIUM WAS DAMAGED?

STRATIFIED KERATINIZED

STRATIFIED NONKERATINIZED

**TRANSITIONAL** 

SIMPLE COLUMNAR

SIMPLE SQUAMOUS

DURING CONTACT WITH CHROMIUM THE WOMAN HAD ALLERGIC DERMATITIS OF BOTH ARMS. WHAT CELLS OF A SKIN WERE MAINLY INVOLVED AT THIS DISEASE?

TISSUE BASOPHILS

**PLASMOCYTES** 

**MACROPHAGES** 

**NEUTROPHILS** 

LYMPHOCYTES

AT A TRAUMA OF A SKIN THE RETICULAR LAYER IS DAMAGED. AT THE EXPENSE OF WHAT ACTIVITY OF WHAT CELLS

THERE IS A NEOGENESIS OF THIS LAYER?

**FIBROBLASTS** 

**MACROPHAGES** 

LYMPHOBLASTIC

**NEUROBLASTIC** 

**ERYTHROBLASTIC** 

ON A SITE OF A SKIN EPIDERMIS DUE TO A TRAUMA THERE ARE NO LAYERS DOWN TO GERMINAL. NAME CELLS, WHICH BECOME THE BASIC SOURCE OF EPIDERMIS REGENERATION.

LAYER OF BASAL CELLS

LAYERS OF SPINOSUM CELLS

LAYERS OF GRANULAR CELLS

LAYERS OF SPINOSUM AND GRANULAR CELLS

**CELL OF A STRATUM LUCIDUM** 

IN CONDITIONS OF EXPERIMENT THE DENSE CONTACT BETWEEN EPITHELIOCYTES OF SKIN IS BROKEN. WHAT FUNCTION OF AN EPITHELIUM WILL DISTURBED?

**MECHANICAL** 

**SECRETORY** 

VITAMIN D SYNTHESIS

**EXCRELORY** 

## **ABSORPTIVE**

IN A MATERIAL OF A SKIN EPIDERMIS THE CELLS WITH PROCESSES ARE FOUND OUT. THEIR CYTOPLASM CONTAINS GRANULES OF DARK BROWN COLOUR. WHAT ARE THESE CELLS?

**MELANOCYTES** 

**KERATINOCYTES** 

MERKEL'S CELLS

LYMPHOCYTES

**EPIDERMAL MACROPHAGES** 

ON A SLIDE OF AN EYEBALL OF A FETUS THE DAMAGE OF A VASCULAR COAT IS REVEALED. WHAT EMBRYONIC MATERIAL WAS DAMAGED AT DEVELOPMENT OF AN EYE?

**MESENCHYME** 

**ECTODERM** 

**ENDODERM** 

**OUTER LAYER OF AN OPTIC CUP** 

INNER LAYER OF AN OPTIC CUP

ON A SLIDE OF AN EYEBALL THE OUTER EPITHELIUM OF A CORNEA IS NOT FULLY DEVELOPED. WHAT GERM LAYER COULD BE DAMAGED DURING AN EMBRYOGENESIS?

**ECTODERM** 

**MESODERM** 

**ENDODERM** 

**OUTER LAYER OF AN OPTIC CUP** 

INNER LAYER OF AN OPTIC CUP

AS A RESULT OF LASER CORRECTION OF VISION ON A LINE OF A SECTION THE STRATIFIED SQUAMOUS EPITHELIUM OF A CORNEA IS PARTIALLY DAMAGED. AT THE EXPENSE OF WHAT CELLS THERE WILL BE REGENERATION OF THIS KIND OF AN EPITHELIUM?

BASAL

**SPINOSUM** 

**FIBROBLASTS** 

**FIBROCYTES** 

LYMPHOCYTES

AT THE PATIENT WITH POLIOMYELITIS, WHICH IS CHARACTERIZED BY DAMAGE OF A SPINAL CORD, FUNCTION OF SCELETAL MUSCLES IS BROKEN. WHAT NEURONS ARE DAMAGED?

**MOTOR** 

INTERCALATED

PSEUDO-UNIPOLAR

PSEUDO-UNIPOLAR AND INTERCALATED

INTERCALATED AND MOTOR

THE PATIENT AFTER RECEPTION OF THE LARGE DOSES OF STREPTOMYCINUM HAD HEARING LOSS. WHAT CELLS OF INNER EAR WAS BROKEN IN THIS CASE?

HAIR

**PILLAR** 

**PHALANGEAL** 

**MULTIPOLAR** 

**CONNECTIVE TISSUE** 

ON A TISSUE SPECIMEN THE PART OF NERVOUS SYSTEM CONSISTING OF GREY AND WHITE MATTER IS SUBMITTED. THE GREY MATTER IS POSED ON PERIPHERY. THE NEURONS FORM THREE EXPRESSED LAYERS: MOLECULAR, GANGLIONIC AND GRANULAR. NAME ORGAN.

**CEREBELLUM** 

SPINAL CORD

**BRAIN STEM** 

**CORTEX OF THE LARGE HEMISPHERES** 

## **OBLONG BRAIN**

THE DOCTOR - OCULIST AT INSPECTION HAS FOUND OUT, THAT THE PATIENT DOES NOT DISTINGUISH BLUE AND GREEN COLOURS. WHAT CELLS OF A RETINA ARE DAMAGED?

CONE

**AMACRINE** 

**ROD** 

**MULTIPOLAR** 

**HORIZONTAL** 

AT THE PATIENT OF 14 YEARS IS REVEALED INFRINGEMENT OF TWILIGHT VISION. WHAT VITAMIN IT IS NOT ENOUGH IN AN ORGANISM?

Α

B-12

B-1

B-6

С

THE PART OF THE CENTRAL NERVOUS SYSTEM HAS A LEVEL-BY-LEVEL LOCATING OF NEURONS, AMONG WHICH THERE ARE CELLS OF SUCH FORMS: STELLALE, FUSIFORM, HORIZONTAL, PYRAMIDAL. WHAT PART THE CNS ANSWERS SUCH STRUCTURE?

**BRAIN CORTEX** 

**CEREBELLUM** 

**HYPOTHALAMUS** 

**OBLONG BRAIN** 

SPINAL CORD

AT THE PATIENT IS DAMAGED CILIARY BODY. WHAT APPARATUS OF AN EYEBALL THUS SUFFERS?

**ACCOMODATIVE** 

**PHOTOSENSITIVE** 

**PHOTOTRANSPORT** 

**PROTECTIVE** 

**TROPHIC** 

ON ELECTROPHOTOGRAPH OF A SENSORY ORGAN ARE VISIBLE HAIR CELLS, ON THEIR APICAL SURFACES ARE PLACED SHORT HAIRS - STEREOCILIA AND KINOCILIUM. WHAT ORGAN OF SENSE HAS SUCH CHARACTERISTIC?

**EQUILIBRIUM** 

VISION

**OLFACTION** 

**HEARING** 

**TASTE** 

AT MICROSCOPIC RESEARCH IN A SLIDE THE STRUCTURE OF NERVOUS SYSTEM CONSISTING OF PSEUDOUNIPOLAR NEURONS IS FOUND OUT. NEURONS ARE COVERED BY GLIAL AND CONNECTIVE TISSUE COATS. DEFINE THE GIVEN STRUCTURE:

SPINAL GANGLION

**VEGETATIVE GANGLION** 

CEREBELLUM

SPINAL CORD

**BRAIN CORTEX** 

AT HISTOLOGICAL RESEARCH OF A HUMAN SKIN THE DENSE IRREGULAR CONNECTIVE TISSUE IS FOUND OUT. WHAT LAYER OF THE GIVEN SKIN WAS SUBMITTED FOR STUDY?

**RETICULAR OF A DERMIS** 

**EPIDERMIS** 

MUSCULAR PLATE

PAPILLARY LAYER OF A DERMIS

**HYPODERMIS** 

THE SECRETORY UNITS OF SWEAT GLANDS CONTAIN MYOEPITHELIAL CELLS. WHAT FUNCTION OF THESE CELLS?

CONTRACTILE

REGENERATIVE

**SECRETORY** 

**PROTECTIVE** 

**SUPPORTING** 

IN A CONSEQUENCE OF A RETINAL APOPLEXY OF AN EYE THE PATIENT HAS LOST ABILITY TO SEE SUBJECTS IN CENTER OF A FIELD OF VISION. IN WHAT PLACE OF A RETINA THERE WAS A HEMORRHAGE?

IN YELLOW MACULA

IN AN IRIDESCENT PART OF A RETINA

IN A CILIAR PART OF A RETINA

IN A BLIND MACULA

IN A VASCULAR COAT

DURING EXPERIMENT IN A BRAIN OF AN ANIMAL WAS DESTROYED A LAYER OF GANGLIONIC CELLS AT AN ANTERIOR CENTRAL GYRUS OF A BRAIN. WHAT FUNCTION OF A CORTEX WAS DAMAGED?

**MOTOR** 

**TROPHIC** 

**SENSITIVE** 

**ASSOCIATIVE** 

**PROTECTIVE** 

DURING INSPECTION OF A POSTERIOR PART OF AN EYEBALL THE OPHTHALMOLOGIST HAS PAID HIS ATTENTION ON THE CENTRAL FOSSA OF A RETINA. WHAT FOSSA IS IT?

YELLOW MACULA

**BLIND MACULA** 

PLACE OF AN EXIT OF AN OPTICAL NERVE

A SITE, WHERE THE VEINS OF A RETINA LEAVE EYES

SITE WHICH DOES NOT CONTAIN OF PHOTORECEPTOR CELLS

ON A SLIDE IMPREGNATED BY SILVER, THE LARGE PEAR SHAPED CELLS WITH 2-3 DENDRITES, WHICH BRANCH IN ONE PLANE, ARE DETERMINED. WHAT STRUCTURE IS RESEARCHED?

**CORTEX OF A CEREBELLUM** 

**RETINA OF AN EYE** 

SPIRAL GANGLION OF INTERNAL EAR

**CORTEX OF A BRAIN** 

SPINAL GANGLION

IN OTOLOGY CLINIC THERE IS A PATIENT WITH LOSS OF HEARING. DURING EXAMINATION WAS REVEALED THAT THIS MIGHT HAPPEN DUE TO TREATMENT OF BIG DOSES OF ANTIBIOTICS. FUNCTION OF WHAT CELLS MIGHT HAVE DISTURBED?

HAIR

**PHALANGEAL** 

**PILLAR** 

**HENSEN'S** 

**CONNECTIVE TISSUE CELLS** 

ON THE MICROSCOPIC SLIDE OF AN EYE A BICONVEX STRUCTURE, COVERED BY CAPSULE, CONTAINING FIBERS, CONNECTED WITH CILIARY BODY BY SUSPENSORY LIGAMENT IS VISIBLE. NAME THIS STRUCTURE.

**LENS** 

**VITREOUS BODY** 

**CILIARY BODY** 

**CORNEA** 

**SCLERA** 

IN THE MICROSCOPIC SLIDE OF ONE ORGAN NUMEROUS FOLIA ARE GOOD REVEALED, CORTEX OF ORGAN HAS THREE DISTINCTIVE LAYERS. WHICH ORGAN IS IT?

**CEREBELLUM** 

**CEREBRAL CORTEX** 

SPINAL CORD

**BRAIN STEM** 

RETICULAR FORMATION

IN MICROSCOPIC SLIDE OF AN EYEBALL WALL A STRUCTURE DEVOIDS OF BLOOD VESSELS IS REVEALED. WHICH STRUCTURE IS IT?

**CORNEA** 

**UVEA** 

**RETINA** 

**CILIARY BODY** 

IRIS

A PATIENT HAS TRAUMATIC INJURY OF THE ANTERIOR ROOTS OF SPINAL CORD. WHAT STRUCTURES FROM LISTED BELOW ARE DISTURBED?

AXONS OF MOTONEURONS AND NEURONS OF LATERAL HORNS

AXONS OF SENSORY NEURONS OF SPINAL GANGLION

**AXONS OF NEURONS OF LATERAL HORNS** 

DENDRITES OF NEURONS OF SPINAL GANGLION

CENTRAL PROCESSES OF SENSORY NEURONS OF SPINAL GANGLION

MIDDLE PART OF COCHLEA OF INNER EAR WAS DESTROYED IN ANIMAL DURING EXPERIMENT. IT WILL CAUSE ABNORMALITIES OF THE SOUND PERCEPTION OF THE FOLLOWING FREQUENCIES:

HIGH AND LOW

HIGH

MIDDLE

**NO ABNORMALITIES** 

LOW

DEFICIENCY OF VITAMIN A LEADS TO DISTURBANCE OF TWILIGHT VISION. WHAT CELLS RESPONSIBLE FOR THIS PHOTOSENSITIVE FUNCTION?

ROD

**HORIZONTAL** 

CONE

**BIPOLAR** 

**GANGLIONIC** 

A BOXER AFTER TRAUMA OF A NOSE HAS DISTURBANCE OF SMELL. WHAT CELLS FROM LISTED BELOW ARE DAMAGED? NEUROSENSITIVE

**SUPPORTING** 

**BASAL** 

**CILIATED** 

**CELLS WITH MICROVILLI** 

AT EYE DISEASE MACULODISTROPHY, THE RETINA OF OLD PEOPLE IS DISTURBED. WHAT SYSTEM OF BLOOD SUPPLY OF THE EYE IS DEPLETED?

RFTINAL

**CILIARY** 

VISCERAL CAPILLARIES

**SOMATIC CAPILLARIES** 

**VEIN PLEXUS** 

IN THE MICROSCOPIC SLIDE OF A RETINA IS REVEALED, THAT CELLS OF THE PIGMENT LAYER OF IT CONTAINS MANY PHAGOSOMES. WHAT FUNCTION OF PIGMENT CELL DOES IT CHARACTERIZE?

PROTECTIVE

REGENERATIVE PERMEABILITY SENSITIVITY ACTIVATION

IN THE SLIDE OF A BRAIN CORTEX THE BIG PYRAMIDAL SHAPE CELLS ARE REVEALED. THE DISCOVERY OF THESE CELLS IS CONNECTED WITH THE NAME OF:

**BETZ** 

GOLGI

LENOSHEK

NISSL

RAMON-Y-CAJAL

EXAMINATION OF AN EYEBALL REVEALS CONGENITAL PATHOLOGY OF A CORNEAL EPITHELIUM. PART OF WHAT GERM LAYER WAS DAMAGED DURING EMBRYONIC DEVELOPMENT?

**ECTODERM** 

**ENDODERM** 

**MESODERM** 

**DERMATOME** 

**NEPHROTOME** 

A PATIENT OF OPHTHALMOLOGIC CLINIC IS EXAMINED. SOME CHANGES WERE REVEALED IN HIS CENTRAL FOVEA OF AN EYE. WHAT STRUCTURE IS CALLED THE CENTRAL FOVEA?

THINNEST REGION OF RETINA

**BLIND MACULA** 

**NERVE OPTIC EXIT** 

PLACE OF RETINAL VEIN EXIT

REGION OF RETINA WITHOUT PHOTOSENSITIVE CELLS

WHICH AFFERENT TRUNK FROM LISTED BELOW REACHES BRAIN CORTEX NOT THROUGH THALAMUS?

**OLFACTORY** 

**ACOUSTIC** 

**EXTEROCEPTIVE** 

**VISUAL** 

**NONICEPTIVE** 

IN OPHTHALMOLOGIC CLINIC A PHYSICIAN WRITE OUT A PRESCRIPTION WITH EYE DROPS. WHAT PARTICULARITY OF AN ANTERIOR CORNEAL EPITHELIUM IS REALIZED AT THAT?

**PERMEABILITY** 

REGENERATION

**SENSITIVITY** 

**PROTECTIVE** 

**TRANSPARENCY** 

THE INCREASED INTRAOCULAR TENSION IS OBSERVED IN THE PATIENT WITH GLAUCOMA. SECRETION OF AQUEOUS HUMOR BY THE CILIARY BODY IS NORMAL. INJURY OF WHAT STRUCTURE OF THE EYEBALL WALL CAUSED THE DISORDER OF FLOWOUT FROM THE ANTERIOR CHAMBER?

**VENOUS SINUS** 

UVEA

**CILIARY MUSCLE** 

**CILIARY BODY** 

POSTERIOR EPITHELIUM OF CORNEA

A PATIENT HAS LOST A SENSIBILITY OF BOTH ARMS FINGERS. WHAT SPINAL CORD STRUCTURES FROM LIST BELOW ARE

DAMAGED?

**POSTERIOR ROOTS** 

**ANTERIOR HORNS** 

**KLARK COLUMNS** 

LATERAL HORNS
POSTERIOR COLUMNS

LEFT VENTRAL AFFERENT SPINOTHALAMIC TRUNK HAS DEFICIENCY OF INFORMATION FROM OPPOSITE PART OF CERTAIN BODY SEGMENT. NEURONS OF WHAT NUCLEUS OF SPINAL CORD POSTERIOR HORN ARE DAMAGED?

**PROPER NUCLEUS** 

SPONGY SUBSTANCE

**GELATINOUS SUBSTANCE** 

THORACIC KLARK NUCLEUS

**VENTRAL** 

NEWBORN HAS A TUMOR IN THE GRAY MATTER OF A BRAIN. WHAT EMBRYONIC SOURCE DOES IT CONNECT TO?

MANTLE LAYER

**EPENDYMA** 

MARGINAL LAYER

**NEURAL CREST** 

**GANGLIONIC PLATE** 

DIABETES MELLITUS MAY BE FOLLOWED BY LOSS OF TRANSPARENCY OF THE LENS OF EYE. THIS CONDITION IS CALLED CATARACT. THE DISTURBANCE OF WHAT LENS STRUCTURE MAY BE AT THIS CASE AT FIRST TURN?

**LENS FIBERS** 

SUBCAPSULAR EPITHELIUM

**LENS NUCLEUS** 

LENS CAPSULE

**CILIARY BODY** 

DURING CLINICAL EXAMINATION OF A PATIENT WITH PATHOLOGY OF EAR WAS REVEALED ABSENCE OF ENDOLYMPH.

WHERE IS THE PLACE OF PATHOLOGY LOCALIZED?

**INNER EAR** 

MIDDLE EAR

**EXTERNAL EAR** 

**EUSTACHIAN TUBE** 

**EAR DRUM** 

THE VENTRAL ROOTS OF 5 FRONTAL SEGMENT OF SPINAL CORD WERE CUT DURING EXPERIMENT IN THE ANIMAL. WHAT

CHANGES WILL TAKE PLACE IN THE INNERVATION REGION?

LOSS OF MOVEMENTS

LOSS OF TOUGH SENSITIVITY

LOSS OF PROPRIOCEPTIVE SENSITIVITY

LOSS OF TEMPERATURE SENSITIVITY

**HYPERSENSITIVITY** 

ELECTROCARDIOGRAPHY REVEALS A DISTURBANCE OF A SYNCHRONY CARDIAC CYCLE PHASES AND INCREASED

TRANSMISSION OF EXCITEMENT ALONG MYOCARDIUM. WHAT STRUCTURES FROM LISTED BELOW, PROVIDING

ELECTRICAL LINK BETWEEN CARDIOMYOCYTES, MAY BE DAMAGED?

**GAP JUNCTION** 

**HEMIDESMOSOME** 

PLACE OF CONTACT OF MYOFIBRILS WITH SARCOLEMMA

INTERCALATED DISK

**ZONULA ADHERENS** 

IN THE MICROSCOPIC SLIDE, STAINED BY ORSEIN, IN THE MIDDLE TUNIC OF BLOOD VESSEL ARE REVEALED FROM 40 TO

60 ELASTIC MEMBRANES. NAME THIS BLOOD VESSEL.

**ELASTIC ARTERY** 

MUSCULAR ARTERY

MUSCULO-ELASTIC ARTERY

**MUSCULAR VEIN** 

ATYPICAL VEIN

IN THE MICROSPECIMEN OF RED BONE MARROW THERE WERE REVEALED BIG CAPILLARIES THROUGH THE WALLS OF WHICH MATURE BLOOD CELLS PENETRATE. WHAT TYPE OF CAPILLARY IS IT?

**SINUSOIDAL** 

**FENESTRATED** 

LYMPHATIC

**VISCERAL** 

SOMATIC

A CONSPICUOUS FEATURE OF THE PACEMAKER'S CELLS OF IMPULSECONDUCTING CARDIAC SYSTEM IS:

BIG AMOUNT OF FREE CALCIUM IN CYTOPLASM

PRESENCE OF T-SYSTEMS

**BIG AMOUNT OF MYOFIBRILS** 

DENSE ARRANGEMENT OF MYOFILAMENTS

**BIG AMOUNT OF MITOCHONDRIA** 

IN THE MICROSCOPIC SLIDE A BLOOD VESSEL IS VISIBLE, A WALL OF WHICH CONSISTS OF ENDOTHELIUM, BASAL LAMINA AND LOOSE CONNECTIVE TISSUE. NAME THIS BLOOD VESSEL.

**UNMUSCULAR VEIN** 

**ARTERY** 

**MUSCULAR VEIN** 

**BLOOD CAPILLARY** 

LYMPHATIC CAPILLARY

ONE OF BLOOD CAPILLARIES HAS WIDE FENESTRATED EPITHELIUM AND PARTIAL OR TOTAL ABSENCE OF BASAL LAMINA UNDERLYING THE ENDOTHELIUM. NAME THIS TYPE OF CAPILLARY.

**SINUSOIDAL** 

**CONTINUOUS** 

**VISCERAL** 

LYMPHATIC

**LACUNAR** 

ONE TYPE OF AN ARTERIOLE IS CALLED VASCULAR SYSTEM "TAP". WHAT STRUCTURAL ELEMENTS OF THIS VESSEL CAN PROVIDE SUCH FUNCTION OF ARTERIOLE?

CIRCULAR MYOCYTES

LONGITUDINAL MYOCYTES

**ELASTIC FIBERS** 

LONGITUDINAL MUSCLE FIBERS

CIRCULAR MUSCLE FIBERS

IN THE WALL OF ONE OF BLOOD VESSEL IS VISIBLE BIG AMOUNT OF ELASTIC FIBERS, LOCATED IN ALL TUNICS. WHAT FACTORS DETERMINE THESE PARTICULARITIES OF SUCH BLOOD VESSEL WALL STRUCTURE?

**BIG BLOOD PRESSURE** 

SMALL BLOOD PRESSURE

**BIG BLOOD SPEED** 

SMALL BLOOD SPEED

OSMOTIC PRESSURE

IN THE MICROSCOPIC SLIDE OF A HEART ONE CAN SEE STAR SHAPED CARDIOMYOCYTES WITH CENTRALLY POSITIONED NUCLEUS, GOOD DEVELOPED ROUGH ENDOPLASMIC RETICULUM, GOLGI APPARATUS AND SPECIFIC GRANULES.THE FUNCTION OF THESE CELLS IS:

**ENDOCRINE** 

CONTRACTILE

CONDUCTION OF IMPULSE

**PROTECTIVE** 

**REGENERATIVE** 

A PATIANT HAS HEART ATTACK. ELECTROCARDIOGRAPHY REVEALS A DISTURBANCE OF HEART RHYTHM. WHICH TYPE OF CARDIOMYOCYTES CAN NOT WORK PROPERLY?

PACEMAKER CELLS

CONTRACTILE CARDIOMYOCYTES

TRANSITIONAL CONDUCTING

CONDUCTING BUNDLE OF HIS

**PURKINJIE FIBERS** 

ONE OF A HEART WALL LAYERS IS SIMILAR TO BLOOD VESSEL WALL ACCORDING TO HISTOGENESIS AND TISSUE CONTENTS. WHAT IS THEIR EMBRYONIC SOURCE OF ORIGIN?

**MESENCHYME** 

**SPLANCHNOTOME** 

**ENDODERM** 

**ECTODERM** 

**SOMITES** 

IN THE MICROSCOPIC SLIDE THERE IS A HEART WALL. ONE OF ITS LAYERS CONTAINS CONTRACTILE, CONDUCTING AND SECRETORY MYOCYTES, ENDOMYSIUM WITH BLOOD VESSELS. WHAT STRUCTURE OF THE HEART DOES IT BELONG TO? MYOCARDIUM OF ATRIUM

**ENDOCARDIUM OF VENTRICLE** 

**PERICARDIUM** 

**ADVENTITIA** 

**EPICARDIUM** 

DURING HISTOCHEMICAL EXAMINATION OF A HEART ARE REVEALED CARDIOMYOCYTES, CONTAINING GRANULES ARE RICHED IN GLYCOPROTEINS. NAME THESE CELLS.

**SECRETORY** 

**CONTRACTILE** 

P-CELLS

**PURKINJE CELLS** 

TRANSITIONAL CELLS

DURING ATHEROSCLEROSIS OBLITERANS IN A PATIENT APPEARED DISTURBANCE OF BLOOD VESSELS OF LEGS. IN A HISTOLOGIC SLIDE ONE OF THESE BLOOD VESSELS HAS GOOD EXPRESSED INNER AND OUTER ELASTIC MEMBRANES, MIDDLE TUNIC CONTAINS MANY MYOCYTES. WHICH BLOOD VESSEL IS IT?

**MUSCULAR ARTERY** 

**ELASTIC ARTERY** 

**MUSCULO-ELASTIC ARTERY** 

**AORTA** 

LYMPHATIC VESSEL

CHILD IS OF ONE YEAR OLD THAT HAS DISTURBANCE OF EMBRYONIC DEVELOPMENT OF A HEART - OPENED BOTALLO'S DUCT. NAME PLACE OF ITS LOCALIZATION IF THE EMBRYONIC HEART.

VESSEL, CONNECTING PULMONARY ARTERY WITH AORTA

INTERATRIAL SEPTUM

INTERVENTRICULAR SEPTUM

VESSEL, CONNECTING UMBILICAL VEIN AND VENA CAVA INFERIOR

VESSEL, CONNECTING VENA PORTA WITH VENA CAVA INFERIOR

DURING EXAMINATION OF A BRAIN DURA MATER WAS FOUND BLOOD VESSEL WITH BIG LUMEN, OUTER TUNIC OF THIS VESSEL GROW TOGETHER WITH SURROUNDINGCONNECTIVE TISSUE. NAME THIS BLOOD VESSEL.

ANMUSCULAR VEIN (ANTYPICAL)

**POSTCAPILLARY VENULE** 

MEDIUM VEIN (POOR DEVELOPED MUSCLE)

LARGE VEIN (WELL DEVELOPED MUSCLE)

**VENULE** 

IN THE MICROSCOPIC SLIDE THERE IS AN ORGAN, WALL OF WHICH CONSISTS OF THREE TUNICS. INNERMOST LAYER CONTAINS ENDOTHELIUM AND THIN SUBENDOTHELIUM. OUTERMOST LAYER IS THE THICKEST. WHICH ORGAN IS IT?

**VFIN** 

**ARTERY** 

**URETER** 

**HEART** 

**UTERUS** 

AORTA DURING SYSTOLE IS EXPANDED AND RETURNED IN REFERENCE POSITION DURING DIASTOLE IN THIS, PROVIDING BLOOD STREAM STABILITY. WHAT BLOOD WALL ELEMENTS PLAY AN IMPORTANT ROLE IN THIS PROCESS?

**ELASTIC FIBERS** 

MUSCULAR FIBERS

**RETICULAR FIBERS** 

**COLLAGEN FIBERS** 

**BIG AMOUNT OF FIBROBLASTS** 

IN MICROSCOPIC SLIDE ONE CAN SEE RECTANGULAR CELLS FROM 50 TO 120 MKM MEASUREMENT WITH CENTRALLY POSITIONED NUCLEUS, GOOD EXPRESSED MYOFIBRILS AND ARE CONNECTED WITH EACH OTHER THROUGH THE INTERCALATED DISCS. FUNCTION OF THESE CELLS IS:

CONTRACTION OF A HEART

CONDUCTION OF NERVE IMPULSE

**ENDOCRINE** 

**PROTECTIVE** 

REGENERATIVE

IN THE MICROSCOPIC SLIDE OF A HEART ARE VISIBLE CELLS AS LIGHT STAINED BUNDLES, HAVING SMALL AMOUNT OF MYOFIBRILS AND GLYCOGEN. THESE CELLS BELONG TO:

**CONDUCTING BUNDLES** 

CONDUCTING PACEMAKER

CONDUCTING TRANSITIONAL

**ENDOCRINE** 

**CONTRACTILE** 

A PATIANT HAS THROMBOPHLEBITIS OF DEEP VEINS OF LEGS. WHAT LAYER OF THE VEIN IS DAMAGED?

**ENDOTHELIUM** 

**SUBENDOTHELIUM** 

LAYER OF ELASTIC FIBERS

LAYER OF SMOOTH MUSCLES

LAYER OF CONNECTIVE TISSUE

INNER SURFACE OF ALL BLOOD VESSELS IS LINED OF EPITHELIUM, WHICH SYNTHESIZES SUBSTANCES, PREVENTING PROCESS OF BLOOD CLOTTING IN VESSELS. WHICH TYPE OF EPITHELIUM IS IT?

SIMPLE SQUAMOUS (ENDOTHELIUM)

STRATIFIED SQUAMOUS NONKERATINIZED

STRATIFIED SQUAMOUS KERATINIZED

SIMPLE SQUAMOUS (MESOTHELIUM)

SIMPLE PSEUDOSTRATIFIED COLUMNAR

IN ELECTROPHOTOGRAPH OF MYOCARDIUM ARE REVEALED CELLS WITH PROCESSES, CONTAINING SMALL AMOUNT OF ORGANELLES, BUT GOOD DEVELOPED ROUGH ENDOPLASMIC RETICULUM, SECRETORY GRANULES. NAME THESE CELLS.

ATRIAL CARDIOMYOCYTES

**VENTRICULAR CARDIOMYOCYTES** 

PACEMAKER CELLS

TRANSITIONAL ATYPICAL CELLS

**BUNDLE OF HIS CELLS** 

IN A PERICARDIAL CAVITY OF A PATIENT WITH EXUDATIVE PERICARDITIS IS REVEALED BIG AMOUNT OF EXUDATE (PATHOLOGY FLUID). DISTURBANCE OF WHICH STRUCTURES CAN LEAD TO THIS APPEARANCE?

MESOTHELIOCYTES
FIBROBLASTS
CONTRACTILE CARDIOMYOCYTES
CONDUCTING MYOCYTES
ENDOTHELIOCYTES

ARTERIOLES PLAY AN IMPORTANT ROLE IN A BLOOD SUPPLY OF STRUCTURAL AND FUNCTIONAL UNITS OF ORGANS. WHAT STRUCTURES FROM LISTED BELOW ARE THE MOST CHARACTERISTICALLY FOR THE MEDIAL TUNIC OF THE ARTERIOLE?

**MYOCYTES** 

ENTERNAL ELASTIC MEMBRANE

**EXTERNAL ELASTIC MEMBRANE** 

SPECIAL CONNECTIVE TISSUE CELLS

**ENDOTHELIOCYTES** 

DURING EXAMINATION OF SLIDE OF BLOOD VESSELS ONE CAN SEE THAT STRUCTURE OF ARTERY WALL DIFFERS FROM STRUCTURE OF WALL OF VEIN. WHAT LIES AT THE BASE OF THESE DIFFERENCES?

**DIFFERENT HEMODYNAMIC CONDITIONS** 

DIFFERENT DIAMETER

**DIFFERENT LENGTH** 

**DIFFERENT FUNCTIONS** 

DIFFERENT DISTANCE FROM HEART

SOME VACCINATIONS ARE DONE IN SUBSCAPULAR AREA. WHAT IS THE DISTINCTIVE FEATURE OF A SKIN IN THIS AREA?

**GREATEST THICKNESS OF A DERMIS** 

**GREATEST THICKNESS OF A HYPODERMIS** 

**GREATEST THICKNESS OF AN EPIDERMIS** 

GREATEST THICKNESS OF A CORNUAL LAYER OF AN EPIDERMIS

ABSENCE OF SWEAT GLANDS

IN HOSPITAL THE INJURED PERSON WITH ATRAUMA OF A BACKSPINE WAS DELIVERED. THE DOCTOR HAS FOUND OUT OPENED FRACTURE OF THORACAL VERTEBRA WITH DAMAGE OF POSTERIOR ROOTS OF A SPINAL CORD. WHAT UNDERGOES TO RETROGRADE DEGENERATION AFTER A TRAUMA?

**PSEUDO-UNIPOLAR NEURONES** 

GLIA

NEURONES OF DORSAL HORNS OF A SPINAL CORD

NEURONES OF VENTRAL HORNS OF A SPINAL CORD

NEURONES OF LATERAL HORNS OF A SPINAL CORD

THE NEUROPATHOLOGIST HAS FOUND OUT DAMAGE OF DORSAL SPINO-CEREBELLAR TRACT. WHAT PROCESSES ARE DAMAGED?

AXONS OF A THORACAL KLARK'S NUCLEUS NEURONES

**AXONS OF POSTERIOR NUCLEUS PROPER NEURONES** 

DENDRITES OF A THORACAL KLARK'S NUCLEUS NEURONES

DENDRITES OF POSTERIOR NUCLEUS PROPER NEURONES

AXONS OF NEURONES OF AN INTERMEDIATE ZONE OF A SPINAL CORD

AT SURVEY OF AN EYE THE DOCTOR - OPHTHALMOLOGIST HAS FOUND OUT A FOREIGN BODY IN A MIDDLE LAYER OF A CORNEA. HOW DOES THIS LAYER REFER TO AS?

SUBSTANTIA PROPRIA

STRATIFIED NONKERATINIZED EPITHELIUM

**DESCEMET'S MEMBRANE** 

**BOWMEN'S MEMBRANE** 

**ENDOTHELIUM** 

THE INHERENT INFRINGEMENT OF FUNCTIONS OF AN INTERMEDIATE PART OF EQUILIBRIUM SENSORY SYSTEM WAS REVEALED. IN NORM IT IS FORMED BY:

AXONS OF BIPOLAR CELLS OF VESTIBULAR GANGLION

DENDRITES OF BIPOLAR CELLS OF VESTIBULAR GANGLION AXONS OF CLIMBING FIBERS OF A CEREBELLUM AXONS OF MOSSY FIBERS OF A CEREBELLUM DENDRITES OF GANGLIONIC CELLS OF A CEREBELLUM

NAME UNDIFFERENTIATED CELLS POSED IN A WALL OF A CAPILLARY AROUND PERICYTES:

ADVENTITIONAL CELLS

**FIBROCYTES** 

SMOOTH MUSCLE CELL

**FIBROBLASTS** 

**MACROPHAGES** 

THE RESTORATION OF DEFECTS OF A VASCULAR WALL AFTER ITS DAMAGE BEGINS WITH:

**ENDOTHELIUM** 

**SMOOTH MUSCLE CELLS** 

**ADVENTITIAL CELLS** 

**BASAL MEMBRANE** 

**CONNECTIVE TISSUE** 

THE GRANULES OF NATRIURETIC FACTOR ARE FOUND IN WHAT REGION OF A HEART:

ATRIAL MUSCLE CELLS

**VENTRICULAR MUSCLE CELLS** 

ATRIAL AND VENTRICULAR MUSCLES

INTERVENTRICULAR SEPTUM

INTERATRIAL SEPTUM

THE RECEPTORS OF THE PRIMARY TYPE OF SENSORY ORGANS ARE FORMED BY:

**DENDRITES OF NERVE CELLS** 

SENSOEPITHELIAL CELLS

**NEUROSECRETORY CELLS** 

ENCAPSULATED AND NONCAPSULATED NERVE ENDINGS

**NEUROENDOCRINE CELLS** 

RETINA OF EYE AND OPTIC NERVE DEVELOP FROM:

**NEURAL TUBE** 

**ENDODERM** 

**NEURAL CREST** 

**MESENCHYME** 

**ECTODERM** 

UVEA AND SCLERA OF AN EYEBALL DEVELOP FROM:

**MESENCHYME** 

**ECTODERM** 

**NEURAL CREST** 

**NEURAL TUBE** 

**ENDODERM** 

ACCOMMODATIVE APPARATUS OF AN EYE IS SUBMITTED BY:

IRIS AND CILIARY BODY

**CORNEA AND VITREOUS BODY** 

CORNEA, LENS, VITREOUS BODY

**RETINA AND VITREOUS BODY** 

IRIS AND VITREOUS BODY

THE PECULIARITY OF CORNEAL CONNECTIVE TISSUE STROMA IS:

ABSENCE OF BLOOD VESSELS

ABSENCE OF FIBROBLASTS

PRESENCE OF GAGS

PRESENCE OF COLLAGEN FIBERS
PRESENCE OF GROUND SUBSTANCE

HOW IS 1-ST NEURON OF A RETINA CALLED?

**PHOTORECEPTOR** 

**BIPOLAR (ASSOCIATIVE)** 

**GANGLIONIC** 

**MULTIPOLAR** 

**MOTOR** 

LAYER OF NERVE FIBERS OF A RETINA CONSISTS OF:

**AXONS OF GANGLIONIC CELLS** 

**AXONS OF BIPOLAR CELLS** 

**DENDRITES OF BIPOLAR CELLS** 

**DENDRITES OF GANGLIONIC CELLS** 

**DENDRITES OF PHOTOSENSITIVE CELLS** 

NAME A LAYER ON WHICH LIGHT ENTERS THE RETINA EARLIER IN TOTAL:

INNER LIMITING MEMBRANE

**OUTER LIMITING MEMBRANE** 

**PHOTORECEPTOR** 

**GANGLIONIC** 

**PIGMENT CELLS** 

NAME THE MAIN DISTINCTIVE ATTRIBUTE IN A STRUCTURE OF RODS AND CONES:

STRUCTURE OF AN OUTER SEGMENT

**CILIUM** 

**GOLGI COMPLEX** 

STRUCTURE OF AN INNER SEGMENT

MITOCHONDRIA

ROUND WINDOW SEPARATES TYMPANIC CAVITY OF THE MIDDLE EAR FROM:

SCALA TYMPANI

SCALA VESTIBULI

**EXTERNAL EAR** 

SCALAE VESTIBULI AND TYMPANI

-

OVAL WINDOW SEPARATES TYMPANIC CAVITY OF THE MIDDLE EAR FROM:

SCALA VESTIBULI

SCALAE VESTIBULI AND TYMPANI

**EXTERNAL EAR** 

SCALA TYMPANI

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WHAT CELLS OF AN INNER EAR COCHLEA ARE AFFERENT AND TRANSMIT NERVE IMPULSE TO THE BRAIN?

**CELLS OF SPIRAL GANGLION** 

**INNER HAIR** 

**OUTER HAIR** 

SENSOEPITHELIAL

PILLAR

WHAT CELLS OF INNER EAR ARE IRRITATED BY MOVEMENTS OF CUPULA?

CELLS OF AMPULAE OF SEMICIRCULAR CANALS

CELLS OF MACULA OF SACCULE

CELLS OF ORGAN OF CORTI

CELLS OF MACULA OF UTRICLE

**CELLS OF VESTIBULE**