

Exam tests

?

Name hormone, which is NOT produced by cortical substance of the adrenal glands:

- +noradrenalin
- mineralocorticoids
- glucocorticoids
- estrogen

?

Name hormone, function of which is supporting Na and Ca balance in the organism:

- +aldosterone
- cortisone
- somatostatin
- androgen

?

Name hormone, function of which is suppressing the allergic and inflammatory reactions:

- +glucocorticoids
- mineralocorticoids
- thyroxin
- progesterone

?

Name hormone, which intensifies the inflammatory reaction of the connective tissue:

- +mineralocorticoids
- adrenalin
- glucocorticoids
- noradrenalin

?

Name hormone, which intensifies the energetic metabolism in the cells:

- +corticosterone
- aldosterone
- estrogen
- somatostatin

?

Name hormone, which is produced by endocrinocytes of the zona glomerulosa:

- +mineralocorticoids
- noradrenalin
- adrenalin
- glucocorticoids

?

Name hormone, which is produced by endocrinocytes of the zona reticularis:

- +androgen
- noradrenalin
- adrenalin
- glucocorticoids

?

Name hormone, which is produced by endocrinocytes of the zona fasciculata:

- +glucocorticoids
- androgen
- progesterone
- aldosterone

?

Name zone, where mitochondria with tubular cristae are present:

- +zone fasciculate
- zone reticularis
- zone glomerulosa
- sudanophobic layer
- ?

Cortical substance of the adrenal glands is formed from:

- +mesoderm
- entoderm
- ectoderm
- sympathetic ganglia
- ?

Function of sudanophobic layer cells is:

- +regeneration of the adrenal cortex
- regeneration of the cerebral substance
- produce sex hormone
- produce adrenalin
- ?

Function of the hydrocortisone:

- +participation in the protein, carbohydrate and mineral metabolism
- intensify the inflammatory reaction of the connective tissue
- intensify reabsorption Na in the tubules of the kidney
- reduce Ca level in the blood
- ?

Which of the following is part of the adrenal gland?

- +All of the following
- Chromaffin cells
- Zona reticularis
- Zona glomerulosa
- Zona fasciculata
- ?

Which part the adrenal gland secretes glucocorticoids?

- +Zona fasciculata
- Chromaffin cells
- Zona reticularis
- Zona glomerulosa
- None of the above
- ?

Name hormone, which is NOT produced by cortical substance of the adrenal glands:

- +noradrenalin
- mineralocorticoids
- glucocorticoids
- estrogen
- ?

Which layer in an artery is primarily skeletal muscle?

- +None of the following
- Tunica intima
- Tunica media
- Tunica externa
- All of the above
- ?

Which of the following is NOT a distinguishing feature between larger veins and arteries?

- +The lumen of a vein is smaller than the lumen?

The intima of aorta consists of:

- +endothelium, lying on the basement membrane, subendothelial layer and plexuses of fibres
- endothelium, lying on the basement membrane, subendothelial layer, internal elastic membrane
- endothelium, lying on the basement membrane, subendothelial layer, external elastic membrane
- internal elastic membrane and external elastic membrane

?

Name vessel, in which media tunic composes of 40 - 70 elastic membranes:

- +arteries of elastic type
- arteries of muscle type
- veins of muscle type
- veins of nonmuscle type

?

Name type vessel, in which media tunic composes of equal number of the smooth muscle cells and elastic fibers:

- +arteries of mixed (muscular-elastic) type
- arteries of muscle type
- veins of nonmuscle type
- veins of muscle type

?

Name vessel, wall is composes endothelium, surrounded by connective tissue:

- +veins of nonmuscle type
- veins of muscle type, with weakly developed muscular elements
- veins of muscle type, with middling developed muscular elements
- veins of muscle type, with highly developed muscular elements

?

Name vessel, in wall which is presence of valves:

- +veins of muscle type, with highly developed muscular elements
- arteries of elastic type
- veins of nonmuscle type
- arteries of muscle type

?

What is NOT structure peculiarities of veins wall?

- +higher content of elastic fibers
- presence of valves
- higher content of collagen fibers
- weak development of circulatory muscle layer

?

Name vessel, through which the blood flows passively due to the gravity:

- +veins of muscle type, with weakly developed muscular elements
- arteries of muscle type
- arteries of mixed (muscular-elastic) type
- veins of muscle type, with highly developed muscular elements

?

Name vessel, in wall which smooth muscle cells are absent:

- +veins of nonmuscle type
- arteries of elastic type
- veins of muscle type, with weakly developed muscular elements
- arteries of mixed type

?

Name vessel, which transports the blood to the organs and tissue:

- +arteries of mixed type
- arteries of elastic type

-veins of nonmuscle type

-veins of muscle type

?

Name vessel, in wall which internal and external elastic membranes are present:

+arteries of muscle type

-arteries of mixed type

-veins of muscle type, with highly developed muscular elements

-veins of nonmuscle type

?

Which layer in an artery contains the endothelium?

+Tunica intima

-Tunica media

-Tunica externa

-All of the above

-None of the above

?

What do you call the simple squamous epithelium that lines the blood vessels?

+Endothelium

-Epithelioid tissue

-Mesothelium

-Transitional

-Pseudostratified

?

The intima of aorta consists of:

+endothelium, lying on the basement membrane, subendothelial layer and plexuses of fibres

-endothelium, lying on the basement membrane, subendothelial layer, internal elastic membrane

-endothelium, lying on the basement membrane, subendothelial layer, external elastic membrane

-internal elastic membrane and external elastic membrane

?

The cerebellum cortex has a three layer structure:

+molecular, ganglionic and granular layers

-molecular, ganglionic and layer of polymorphic cells

-molecular, pyramidal and granular layers

-molecular, pyramidal and ganglionic layers

?

The ganglionic layer of cerebellum is formed by:

+a single row of flask-shaped Purkinje's cells

-the bodies of basket and satellite cells

-large satellite cells with short and long axons, cells-granules

-the bodies of basket cells and cells-granules

?

The molecular layer of cerebellum is formed by:

+the bodies of basket and satellite cells

-a single row of flask-shaped Purkinje's cells

-large satellite cells with short and long axons, cells-granules

-the bodies of basket cells and cells-granules

?

The granular layer of cerebellum is formed by:

+large satellite cells with short and long axons, cells-granules

-the bodies of basket and satellite cells

-a single row of flask-shaped Purkinje's cells

-cells-granules and the bodies of basket cells

?

Name layer, which Hemisphere cortex does not include:

- +agranular layer
- ganglionic layer
- the pyramidal layer
- the molecular layer

?

The basket cells axons in composition of the cerebellum molecular layer:

- +send collaterals and surround the perikaryons of the Purkinje's cells
- form synapses with the dendrites of the cells-granules in granular layer
- enter the white matter
- send collaterals and surround the perikaryons of the large satellite cells

?

The excitatory impulses to the cerebellum are transmitted by:

- +moss-like and liana like fibres
- the axons of the Purkinje's cells
- basket cells of the molecular layer and cells-granules of the granular layer
- satellite and basket cells of the molecular layer and large satellite cells of the granular layer

?

Inhibition in the cerebellum - is a function of the:

- +satellite and basket cells of the molecular layer and large satellite cells of the granular layer
- satellite and basket cells of the molecular layer and cells-granules of the granular layer
- basket cells of the molecular layer and cells-granules of the granular layer
- moss-like and liana like fibres

?

The cells-granules axons in composition of the cerebellum granular layer enter the:

- +molecular layer and form synapses with dendrites of the basket, satellite and Purkinje's cells
- ganglionic layer and form synapses with the perikaryons of the Purkinje's cells
- white matter, which form ascending and descending tracts
- molecular layer and form synapses with satellite cells

?

Satellite and basket cells of the cerebellum molecular layer transmit impulses to the:

- +dendrites and bodies of Purkinje's cells
- dendrites and bodies of the cell-granules and Golgi cells
- bodies of Purkinje's cells and bodies cell-granules
- white matter, which form ascending and descending tracts

?

What is the outer layer of the GI tract called when it is abutting another organ?

- +Adventitia
- Mucosa
- Submucosa
- Muscularis externa
- Serosa

?

What is the innermost layer of the GI tract called?

- +Mucosa
- Submucosa
- Muscularis externa
- Serosa
- Adventitia

?

What type of epithelium is in a nasal part of pharynx:

- +pseudostratified ciliated
 - stratified flat non-keratinizing
 - stratified flat keratinizing
 - monolayer prismatic glandular
- ?

!What type of epithelium is in esophagus:

- +stratified flat non-keratinizing
 - stratified flat keratinizing
 - pseudostratified ciliated
 - monolayer prismatic glandular
- ?

Where are located esophagus cardiac glands:

- +in the lamina propria of mucosa tunic
 - in the submucous tunic
 - in the epithelium
 - in the adventitial tunic
- ?

Where are located esophagus glands:

- +in the submucous tunic
 - in the adventitial tunic
 - in the lamina propria of mucosa tunic
 - in the epithelium
- ?

Muscular tunic in esophagus is represented:

- +transverse-striated, smooth and combination muscular tissues
 - only smooth muscular tissue
 - only transverse-striated muscular tissue
 - only combination muscular tissue
- ?

What type of epithelium is in stomach:

- +monolayer prismatic glandular
 - stratified flat non-keratinizing
 - stratified flat keratinizing
 - pseudostratified ciliated
- ?

Function of the main cells:

- +synthesize nonactive form of enzymes
 - synthesize hydrogen and chlorine ions
 - synthesize hormones
 - synthesize mucous
- ?

Function of the mucous cells:

- +synthesize mucous
 - synthesize hydrogen and chlorine ions
 - synthesize hormones
 - synthesize nonactive form of enzymes
- ?

Function of the parietal cells:

- +synthesize hydrogen and chlorine ions
- synthesize hormones
- synthesize nonactive form of enzymes
- synthesize mucous

?

Pyloric glands are composed of:

- +mucous, parietal and endocrine cells
- endocrine, mucous and main cells
- endocrine, mucous and parietal cells
- main, endocrine, mucous and parietal cells

?

Muscular lamina of mucous tunic is composed of smooth muscular cells:

- +internal and external layers circular and middle layer longitudinal
- internal and external layers longitudinal and middle layer circular
- internal layer circular, external - squint, middle layer longitudinal
- internal layer longitudinal, external - circular, middle layer squint

?

Muscular tunic is composed of smooth muscular cells:

- +internal layer squint, external - longitudinal, middle layer circular
- internal layer longitudinal, external - circular, middle layer squint
- internal and external layers longitudinal and middle layer circular
- internal layer squint, external - circular, middle layer longitudinal

?

What are developing gametes called?

- +Oocyte
- Oogenesis
- Ovary
- Ovulation
- Ova

?

What is the inner part of the ovary?

- +Medulla
- Follicle
- Germinal epithelium
- Tunica albuginea
- Cortex

?

Which stage of the follicle is arrested in prophase?

- +Primordial follicle
- Primary follicle
- Secondary follicle
- Mature follicle
- Graffian follicle

?

What is the cavity within a secondary follicle?

- +Antrum
- Graffian follicle
- Theca folliculi
- Granulosa cells
- Zona pellucida

?

During the first week to 10 days, what is the main hormone which stimulates the growth of the follicles?

- +FSH
- LH
- HCG
- Estrogen

-Progesterone

?

What is the female organ called where gametogenesis occurs?

+Ovary

-Oogenesis

-Ovulation

-Oocyte

-Ova

?

Which stage of the follicle is marked by the surrounding of flattened (squamous) follicular cells becoming cuboidal?

+Primary follicle

-Primordial follicle

-Secondary follicle

-Mature follicle

-Graffian follicle

?

What is ovulated?

+Graffian follicle

-Theca folliculi

-Granulosa cells

-Zona pellucida

-Antrum

?

What is the outer part of the ovary?

+Cortex

-Follicle

-Germinal epithelium

-Medulla

-Tunica albuginea

?

During a pregnancy, which hormone maintains the corpus luteum?

+HCG

-FSH

-LH

-Estrogen

-Progesterone

?

Which structure contains the oocyte?

+Follicle

-Germinal epithelium

-Medulla

-Tunica albuginea

-Cortex

?

Which follicular stage is also called an antral follicle?

+Secondary follicle

-Primordial follicle

-Primary follicle

-Mature follicle

-Graffian follicle

?

Proliferation and vascularization stage is characterized by:

- +quick division of granulosa and theca cells
- changing the size of granulosa and theca cells, accumulation of lutein
- progesterone synthesis by luteocytes
- destruction of luteocytes, formation of white body

?

Name follicles, in which zona pellucida appear:

- +in the primary follicles
- in the secondary follicles
- in the tertiary follicles
- in the primordial follicles

?

Primordial follicles consist of:

- +primary oocyte and single layer of flat follicular cells
- secondary oocyte and single layer of flat follicular cells
- primary oocyte, one - two layers of cuboidal follicular cells and zona pellucida
- primary oocyte, zona pellucida and multi layer follicular epithelium

?

Glandular metamorphosis stage is characterized by:

- +changing the size of granulosa and theca cells, accumulation of lutein
- destruction of luteocytes, on the spot of body yellow body white forms
- quick division of granulosa and theca cells
- progesterone synthesis by luteocytes

?

Primary follicles consist of:

- +primary oocyte, one - two layers of cuboidal follicular cells and zona pellucida
- primary oocyte, zona pellucida and multi layer follicular epithelium
- primary oocyte and single layer of flat follicular cells
- primary oocyte and multi layer of flat follicular cells

?

Name follicles, in which theca follicle is formed:

- +secondary follicles
- tertiary follicles
- primary follicles
- primordial follicles

?

During regressive development stage take place:

- +destruction of luteocytes, on the spot of body yellow body white forms
- progesterone synthesis by luteocytes
- quick division of granulosa and theca cells
- changing the size of granulosa and theca cells, accumulation of lutein

?

Secondary follicles consist of:

- +primary oocyte, zona pellucida and multi layer follicular epithelium
- secondary oocyte and single layer of flat follicular cells
- secondary oocyte, zona pellucida and multi layer follicular epithelium
- primary oocyte, one - two layers of cuboidal follicular cells and zona pellucida

?

Zona pellucida is produced by:

- +oocyte
- follicular cells

-yellow body

-white body

?

Name hormone, which follicular cells produce:

+estrogens

-progesteron

-testosterone

-aldosterone

?

Name follicles, where corona radiata is formed:

+in the tertiary follicles

-in the primary follicles

-in the primordial follicles

-in the secondary follicles

?

Name follicles, in which follicular cells begin to secrete follicular fluid:

+secondary follicles

-mature tertiary follicles

-primary follicles

-primordial follicles

?

Atretic bodies are formed from:

+follicles ceased their development

-yellow body

-white body

-primordial follicles

?

Bloom growth stage is characterized by:

+progesterone synthesis by luteocytes

-destruction of luteocytes, formation of white body

-quick division of granulosa and theca cells

-changing the size of granulosa and theca cells, accumulation of lutein

?

Name fluid, which fills the space within the membranous labyrinth of the cochlea:

+endolymph

-perilymph

-water fluid

-lymph

?

The cochlear duct is a triangular canal, lying between:

+the basilar and vestibular membrane

-external and internal ear

-the tympanic membrane and vestibule

-the auditory tube and basilar membrane

?

The spiral organ of Corti is placed on:

+the basilar membrane

-the vestibular membrane

-the stria vascularis

-the spiral ligament

?

Tunnel of Corti is enclosed by:

- +internal and external rod cells
- internal and external hair cells
- internal and external phalangeal cells
- internal and external conuses cells
- ?

Name membrane, which separates the external acoustic meatus from the middle ear:

- +the tympanic membrane
- the membrane tectoria
- the basilar membrane
- the vestibular membrane
- ?

The space between the membranous labyrinth and the bony labyrinth is filled by:

- +perilymph
- endolymph
- water fluid
- lymph
- ?

Name layers of the stria vascularis:

- +marginal, intermediate, basal
- epithelial, vascular, fibrous
- fibrous, marginal, vascular
- epithelial, intermediate, vascular
- ?

Name function of the marginal layer epithelium of the stria vascularis:

- +formation of the endolymph
- supporting of the outer and inner hair cells
- formation of the perilymph
- synthesis of blood proteins and enzymes
- ?

The membranous labyrinth includes next layers:

- +outer fibrous layer, middle vascular layer, inner epithelial layer
- outer epithelial layer, middle vascular layer, inner fibrous layer
- outer vascular layer, middle epithelial layer, inner fibrous layer
- outer vascular layer, middle fibrous layer, inner epithelial layer
- ?

Name cells of the Corti organ:

- +outer and inner hair cells, phalangeal cells, rod cells
- outer and inner hair cells, rod cells, endotheliocytes
- outer and inner hepatocytes, phalangeal cells, rod cells
- phalangeal cells, rod cells, fibroblasts, cardiomyocytes
- ?

The inner hair cells are:

- +piriform (flask shaped)
- cylindrical
- triangular
- cuboidal
- ?

The outer hair cells are:

- +cylindrical
- piriform (flask shaped)
- triangular
- ?

Which layer of the heart is composed of cardiac muscle?

- +Myocardium
 - Epicardium
 - Pericardium
 - Endocardium
 - Endomysium
- ?

Where is the myocardium the thickest?

- +Left ventricle
 - Right atria
 - Left atria
 - Right ventricle
 - Both right and left ventricle
- ?

What is the connective tissue sac surrounding the heart?

- +Pericardium
 - Epicardium
 - Myocardium
 - Endocardium
 - Endomysium
- ?

What is the connective tissue called which surrounds an individual cardiac muscle fiber?

- +Endomysium
 - Epicardium
 - Pericardium
 - Myocardium
 - Endocardium
- ?

What is the pacemaker of the heart?

- +Sinoatrial node
 - Atrioventricular node
 - Bundle of His
 - Right bundle branch
 - Purkinje fiber
- ?

Which of the following is not true regarding the endocardium?

- +The endocardium contains abundant adipose tissue
 - The endocardium is layered
 - The endocardium contains blood vessels
 - The endocardium contains smooth muscle
 - The endocardium is lined by endothelium
- ?

What is the atrioventricular bundle?

- +Bundle of His
 - Sinoatrial node
 - Atrioventricular node
 - Right bundle branch
 - Purkinje fiber
- ?

Where is endothelium located?

- +Endocardium
- Epicardium

- Pericardium
- Myocardium
- Endomysium
- ?

"Pulling on heartstrings" refers to strong feelings of love or sympathy pulling one's conscience. What anatomical structure is it a reference to?

- +Chordae tendinae
- Sinoatrial node
- Bundle of His
- Right bundle branch
- Purkinje fiber
- ?

Where are the blood vessels which supply the heart located?

- Epicardium
- Pericardium
- Myocardium
- Endocardium
- Endomysium
- ?

Name layer, which NO presence in endocardium:

- +external elastic membrane
- muscular-elastic layer
- subendothelial layer
- endothelium, lying on the basement membrane
- ?

Function of conductive cardiomyocytes:

- +generation and conduction of electric impulses
- syntheses of hormones
- formation of intercellular substance of the myocardium
- contraction of ventricles
- ?

Function of contractive cardiomyocytes:

- +contraction of ventricles and atrium
- syntheses of hormones
- formation of intercellular substance of the myocardium
- generation and conduction of electric impulses
- ?

Function of P-cells:

- +generation of electric impulses
- transmit impulses to working myocardium
- syntheses of hormones
- transmit impulses to Purkinje cells
- ?

Where does generation of electric impulses occur:

- +in sinus node
- in atrioventricular node
- in working myocardium
- in atrioventricular bundle
- ?

Function of Purkinje cells:

- +transmit impulses to working myocardium
- transmit impulses to P-cells

- syntheses of hormones
- generation of electric impulses
- ?

Purkinje cells are located:

- +in atrioventricular bundle
- in atrioventricular node
- in sinus node
- in "skeleton" of the heart
- ?

Secretory cardiomyocytes are located:

- +in atria
- in endocardium
- in sinus node
- in ventricles
- ?

Function of ANF (atrial natriuretic factor):

- +decreases blood pressure
- increases blood pressure
- anticoagulation
- anti-inflammatory action
- ?

Name layer, which NO presence in epicardium:

- +layer of internal elastic membrane
- layer of elastic fibers
- deep layer of collagenous - elastic fibers
- deep layer of collagenous fibers
- ?

What is covered of pericardium?

- +mesothelium
- endothelium
- Purkinje cells
- secretory cardiomyocytes
- ?

Function of secretory cardiomyocytes:

- +syntheses of antitrombic factor
- syntheses of antibodies
- syntheses histamine
- destroys histamine
- ?

Intestinal villus - are:

- +fingers protrusion of a mucous tunic in the intestine space
- tubular pitting of epithelium in lamina propria
- tubular pitting of epithelium in submucosa tunic
- alveolar pitting of epithelium in submucosa tunic
- ?

Intestinal crypts - are:

- +tubular pitting of epithelium in lamina propria
- tubular pitting of epithelium in submucosa tunic
- fingers protrusion of a mucous tunic in the intestine space
- alveolar pitting of epithelium in submucosa tunic
- ?

Intestinal villus - are composed of:

+epithelium and lamina propria

-only epithelium

-epithelium, lamina propria and muscular lamina of mucous tunic

-mucous tunic and submucous tunic

?

Function of the edging cells:

+to provide parietal digestion

-synthesize hydrogen and chlorine ions

-synthesize mucous

-synthesize dipeptidas

?

Function of the goblet cells:

+synthesize mucous

-synthesize nonactive form of enzymes

-to provide parietal digestion

-synthesize hydrogen and chlorine ions

?

Function of the cells with acidophile granules (Paneth):

+synthesize dipeptidas

-to provide parietal digestion

-synthesize hydrogen and chlorine ions

-synthesize mucous

?

Name part of intestine, where in the submucous tunic glands are located:

+duodenum

-sigmoid colon

-jejunum

-ileum

?

Function of the duodenal glands:

+neutralize the hydrochloric acid and carbohydrate cleavage

-carbohydrate and albumen cleavage

-synthesize hydrogen and chlorine ions

-provides parietal digestion

?

Function of the prismatic (absorptive) cells in the large intestine:

+to provide the process of absorbing

-neutralize the hydrochloric acid and carbohydrate cleavage

-synthesize dipeptidas

-synthesize mucous

?

Name cells, which are absent in the intestinal crypts of the large intestine:

+edging cells

-endocrine cells

-goblet cells

-prismatic (absorptive) cells

?

What type of epithelium is in ampoule part of the rectum:

+monolayer prismatic

-stratified flat non-keratinizing

-stratified flat keratinizing

-pseudostratified ciliated

?

What type of epithelium is in lower part of the anal canal:

- +stratified flat keratinizing
- monolayer prismatic glandular
- pseudostratified ciliated
- stratified flat non-keratinizing

?

Where are anal glands located:

- +in the submucous tunic of anal canal
- in the lamina propria of the anal canal mucousa tunic
- in the submucous tunic of ampoule part of rectum
- in the lamina propria of mucousa tunic of ampoule part of rectum

?

Which gland secretes melatonin?

- +Pineal gland
- Pancreas
- Thyroid
- Adrenal gland (cortex)
- Adrenal gland (medulla)

?

What organ is nicknamed the "master gland"

- +Pituitary
- Adrenal medulla
- Adrenal cortex
- Brain
- Heart

?

What cell type secretes ACTH?

- +Corticotropic cells
- Lactotropic cells
- Thyrotropic cells
- Somatotropic cells
- Gonadotropic cells(MSH).

?

Which of the following is NOT a characteristic of the endocrine system?

- +Glands with ducts
- Products secreted into blood
- Secretes hormones
- Non localized response
- All of the following are characteristics of the endocrine system

?

Acidophilic adenocytes are divided into:

- +somatotropocyti and mammotropocyti
- gonadotropocyti and thyrotropocyti
- somatotropocyti and thyrotropocyti
- mammotropocyti and gonadotropocyti

?

Basophilic adenocytes are divided into:

- +gonadotropocyti, thyrotropocyti, corticotropocyti
- somatotropocyti and gonadotropocyti
- mammotropocyti and gonadotropocyti
- gonadotropocyti, thyrotropocyti and somatotropocyti

?

The intermediate part of the hypophysis is represented by:

- +lipotropocyti and melanotropocyti
- somatotropocyti and thyrotropocyti
- mamotropocyti and melanotropocyti
- lipotropocyti and thyrotropocyti

?

Neurohypophysis contains:

- +vasopressin and oxytocin
- prolactin and oxytocin
- thyrotropic hormone and lipotropin
- vasopressin and folliclestimulating hormone

?

Cellular composition of epiphysis:

- +secretory cells - pinealocyti and supporting glyocyti
- secretory cells - lipotropocyti and supporting glyocyti
- secretory cells - pinealocyti and supporting pituicytes
- secretory cells - somatotropocyti and supporting pituicytes

?

Adenohypophysis includes next parts:

- +anterior, middle, tubercular
- posterior, anterior, middle
- middle, tubercular, posterior
- middle and tubercular

?

Function of somatotrophic hormone is:

- +activation of the growth process in the whole organism and separate organs
- contraction of the smooth muscle of the uterus during the labour
- reabsorbtion of primary urine in the renal canaliculi
- stimulation of adenohypophysis hormonal activity

?

Name hormone, which is not produced in the anterior part of the hypophysis:

- +melanocystostimulating hormone
- adrenocorticotropic hormone
- thyrotropic hormone
- folliclestimulating hormone

?

Function of adrenocorticotropic hormone is:

- +activation of endocrine function of the adrenal cortex
- contraction of the smooth muscle of the uterus during the labour
- reabsorbtion of primary urine in the renal canaliculi
- stimulation of adenohypophysis hormonal activity

?

Prolactin stimulates:

- +the lactation in the mammary glands and progesterone synthesis by the yellow body
- reabsorbtion of primary urine in the renal canaliculi
- contraction of the smooth muscle of the uterus
- the adenohypophysis hormonal activity

?

Name central organs of endocrine system:

- +hypothalamus, hypophysis, epiphysis
- hypothalamus, thyroid gland, hypophysis

-hypophysis, thyroid gland, parathyroid glands

-hypothalamus, pancreas, epiphysis

?

Name nuclei, which are located in the posterior portion of hypothalamus:

+mammillary and posterior

-dorsomedial, ventromedial and arcuate

-paraventricular and supraoptical

-mammillary, paraventricular and ventromedial

?

Name nuclei, which are located in the middle portion of hypothalamus:

+dorsomedial, ventromedial and arcuate

-paraventricular and supraoptical

-mammillary, paraventricular and ventromedial

-mammillary and posterior

?

Name nuclei, which are located in the anterior portion of hypothalamus:

+paraventricular and supraoptical

-mammillary and posterior

-dorsomedial, ventromedial and arcuate

-mammillary, paraventricular and ventromedial

?

One of the oxytocin functions is:

+contraction of the smooth muscle of the uterus during the labour

-increase of primary urine reabsorption in the renal canaliculi

-stimulation of endocrine function of adrenal cortex

-activation of the entire organism growth

?

One of the vasopressin functions is:

+increase of primary urine reabsorption in the renal canaliculi

-activation of the entire organism growth

-contraction of the smooth muscle of the uterus during the labour

-stimulation of endocrine function of adrenal cortex

?

Name peripheral organs of endocrine system:

+thyroid gland, parathyroid glands, adrenal glands

-hypothalamus, thyroid and parathyroid glands

-hypophysis, thyroid gland, hypothalamus

-hypothalamus, pancreas, epiphysis

?

Name hormone, which is produced by supraoptical nuclei:

+vasopressin

-oxytocin

-lipotropin

-prolactin

?

Name hormone, which is produced by paraventricular nuclei:

+oxytocin

-lipotropin

-prolactin

-vasopressin

?

Name nuclei, which produce liberins and statins:

- +dorsomedial, ventromedial and arcuate
- paraventricular and supraoptical
- dorsomedial, supraoptical and mammillary
- dorsomedial, ventromedial

?

Function of liberins:

- +stimulation of adenohypophysis hormonal activity
- depression of adenohypophysis hormonal activity
- contraction of the smooth muscle of the uterus during the labour
- reabsorption of primary urine in the renal canaliculi

?

Function of statins:

- +depression of adenohypophysis hormonal activity
- contraction of the smooth muscle of the uterus during the labour
- reabsorption of primary urine in the renal canaliculi
- stimulation of adenohypophysis hormonal activity

?

Vasopressin and oxytocin pass into:

- +neurohypophysis
- adenohypophysis
- middle portion of hypothalamus
- epiphysis

?

Acidophilic adenocytes are divided into:

- +somatotropocyti and mammotropocyti
- gonadotropocyti and thyrotropocyti
- somatotropocyti and thyrotropocyti
- mammotropocyti and gonadotropocyti

?

Basophilic adenocytes are divided into:

- +gonadotropocyti, thyrotropocyti, corticotropocyti
- somatotropocyti and gonadotropocyti
- mammotropocyti and gonadotropocyti
- gonadotropocyti, thyrotropocyti and somatotropocyti

?

The intermediate part of the hypophysis is represented by:

- +lipotropocyti and melanotropocyti
- somatotropocyti and thyrotropocyti
- mammotropocyti and melanotropocyti
- lipotropocyti and thyrotropocyti

?

Neurohypophysis contains:

- +vasopressin and oxytocin
- prolactin and oxytocin
- thyrotropic hormone and lipotropin
- vasopressin and folliclestimulating hormone

?

Cellular composition of epiphysis:

- +secretory cells - pinealocyti and supporting glyocyti
- secretory cells - lipotropocyti and supporting glyocyti
- secretory cells - pinealocyti and supporting pituicytes
- secretory cells - somatotropocyti and supporting pituicytes

?

Adenohypophysis includes next parts:

- +anterior, middle, tubercular
- posterior, anterior, middle
- middle, tubercular, posterior
- middle and tubercular

?

Function of somatotrophic hormone is:

- +activation of the growth process in the whole organism and separate organs
- contraction of the smooth muscle of the uterus during the labour
- reabsorption of primary urine in the renal canaliculi
- stimulation of adenohypophysis hormonal activity

?

Name hormone, which is not produced in the anterior part of the hypophysis:

- +melanocystostimulating hormone
- adrenocorticotropic hormone
- thyrotropic hormone
- folliclestimulating hormone

?

Function of adrenocorticotropic hormone is:

- +activation of endocrine function of the adrenal cortex
- contraction of the smooth muscle of the uterus during the labour
- reabsorption of primary urine in the renal canaliculi
- stimulation of adenohypophysis hormonal activity

?

Prolactin stimulates:

- +the lactation in the mammary glands and progesterone synthesis by the yellow body
- reabsorption of primary urine in the renal canaliculi
- contraction of the smooth muscle of the uterus
- the adenohypophysis hormonal activity

?

Name central organs of endocrine system:

- +hypothalamus, hypophysis, epiphysis
- hypothalamus, thyroid gland, hypophysis
- hypophysis, thyroid gland, parathyroid glands
- hypothalamus, pancreas, epiphysis

?

Name nuclei, which are located in the posterior portion of hypothalamus:

- +mammillary and posterior
- dorsomedial, ventromedial and arcuate
- paraventricular and supraoptical
- mammillary, paraventricular and ventromedial

?

Name nuclei, which are located in the middle portion of hypothalamus:

- +dorsomedial, ventromedial and arcuate
- paraventricular and supraoptical
- mammillary, paraventricular and ventromedial
- mammillary and posterior

?

Name nuclei, which are located in the anterior portion of hypothalamus:

- +paraventricular and supraoptical
- mammillary and posterior

-dorsomedial, ventromedial and arcuate
-mammillary, paraventricular and ventromedial
?

One of the oxytocin functions is:

+contraction of the smooth muscle of the uterus during the labour
-increase of primary urine reabsorption in the renal canaliculi
-stimulation of endocrine function of adrenal cortex
-activation of the entire organism growth
?

One of the vasopressin functions is:

+increase of primary urine reabsorption in the renal canaliculi
-activation of the entire organism growth
-contraction of the smooth muscle of the uterus during the labour
-stimulation of endocrine function of adrenal cortex
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-prolactin
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- middle portion of hypothalamus
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Name cells, which take part in reactions of cellular immunity:

- +T - killer, macrophage
- T - helper, macrophage, B - lymphocyte
- macrophage, B - lymphocyte
- T - killer, B - lymphocyte

?

Name cells, which take part during humoral immune reactions:

- +T - helper, macrophage, B - lymphocyte, plasmatic cell
- T - killer, macrophage
- macrophage, B - lymphocyte, T - killer
- T - killer, B - lymphocyte

?

Name cells, which produce antibodies:

- +plasmatic cells
- B - lymphocytes
- T - killers
- macrophages

?

During cellular immune reactions perforin is produced by:

- +T - killers
- plasmatic cells
- B - lymphocytes
- macrophages

?

Name organ, in which antigen-independent proliferation and differentiation of T - lymphocytes takes place:

- +thymus
- red bone marrow
- spleen
- lymph node

?

Name cells, which produce IL - 2:

- +T - helper
- macrophage
- plasmatic cell
- B - lymphocyte

?

Name substance, which stimulate proliferation of B - lymphoblasts during humoral immune reactions:

- +IL - 5
- IL - 6
- perforin
- IL - 1

?

Name function of IL - 6:

- +differentiation of B - lymphoblasts into B-memory and plasmatic cells
- proliferation of B - lymphoblasts
- proliferation and differentiation of T - helpers

-blastotransformation of B - lymphocytes into B - lymphoblasts

?

Name function of IL - 4:

+blastotransformation of B - lymphocytes into B - lymphoblasts

-differentiation of B - lymphoblasts into B-memory and plasmatic cells

-proliferation of B - lymphoblasts

-proliferation and differentiation of T - helpers

?

Name substance, which stimulates proliferation of T - helpers during humoral immune reactions:

+IL - 2

-IL - 6

-perforin

-IL - 5

?

Name the cell, which recognizes antigen during humoral immune reactions:

+macrophage

-T - killer

-plasmatic cell

-B - lymphocyte

?

Name cell, which recognizes cancer cell during cellular immune reactions:

+T - killer

-macrophage

-plasmatic cell

-B - lymphocyte

?

Name cell, which produces IL - 1:

+macrophage

-T - killer

-plasmatic cell

-B - lymphocyte

?

Name cell, which change corpuscular antigen into molecular:

+macrophage

-T - killer

-plasmatic cell

-B - lymphocyte

?

The visceral layer of Bowman`s capsule consists of:

+podocytes

-simple squamous epithelial cells

-glomerulus

-simple cuboidal epithelium

?

The parietal layer of Bowman`s capsule consists of:

+simple squamous epithelial cells

-simple cuboidal epithelium

-podocytes

-glomerulus

?

Name component, which DOES NOT form filtration barrier:

+parietal layer of Bowman`s capsule

- endothelial wall of the capillary
 - basal lamina
 - visceral layer of Bowman`s capsule
- ?

The renal corpuscle is composed of:

- +glomerulus and Bowman`s capsule
 - only Bowman`s capsule
 - glomerulus and parietal layer of Bowman`s capsule
 - glomerulus and renal tubular
- ?

The glomerulus is composed of:

- +fenestrated type capillaries
 - sinusoid type capillaries
 - capillaries with continuous endothelial lining
 - capillaries, arterioles and venules
- ?

Filtration slits are located between:

- +neighboring pedicels
 - neighboring podocytes
 - capillaries
 - parietal and visceral layers of Bowman`s capsule
- ?

Proximal tubule of nephron is composed of:

- +cuboidal and high cuboidal epithelium with microvilli on the apical part
 - pseudostratified ciliated epithelium
 - transitional epithelium
 - transitional epithelium and lamina propria
- ?

What is NOT resorpted in the proximal tubule:

- +fat
 - 100% of protein
 - glucose
 - sodium, and chloride ions
- ?

The thin tubule of Henle`s loop is composed of:

- +squamous epithelial cells
 - transitional epithelium
 - pseudostratified ciliated epithelium
 - cuboidal and high cuboidal epithelium with microvilli on the apical part
- ?

Function of the descending thin limb of Henle`s loop:

- +permeable to water and permeable to sodium and chloride
 - permeable to protein
 - permeable to glucose
 - permeable to fat
- ?

Function of the ascending thin limb of Henle`s loop:

- +impermeable to water, permeable to salts: sodium and chloride
 - permeable to water and impermeable to sodium and chloride
 - permeable to protein
 - permeable to glucose
- ?

The thick ascending limb of Distal tubule is composed of:

- +simple cuboidal epithelium
- squamous epithelial cells
- high cuboidal epithelium with microvilli on the apical part
- transitional epithelium
- ?

Function of the Distal tubule:

- +impermeable to water, permeable to salts: sodium and chloride
- impermeable to water, sodium and chloride
- permeable to water and impermeable to sodium and chloride
- permeable to protein
- ?

Function of the collecting tubule is:

- +creating the acid environment of urine
- resorbtion of protein
- resorbtion of glucose
- creating the alkaline environment of urine
- ?

What is located in the medullary rays:

- +collecting tubules
- renal corpuscle
- interlobar arteries and interlobular veins
- Henle`s loop
- ?

What is the glomerulus?

- +Capillary tuft
- Afferent arteriole
- Efferent arteriole
- Peritubular capillaries
- Vasa recta
- ?

What is a renal pyramid and its associated cortex referred to?

- +Lobe
- Medulla
- Renal columns
- Nephron
- Medullary ray
- ?

Approximately how many nephrons are there in each kidney?

- +1,000,000
- 1,000
- 10,000
- 100,000
- 10,000,000
- ?

What is the Malpighian corpuscle?

- +Renal corpuscle
- Glomerulus
- Bowman's capsule
- Loop of Henle
- Distal convoluted tubule
- ?

What are the ducts of Bellini?

- +Collecting tubules
- Distal convoluted tubule
- Proximal convoluted tubule
- Loop of Henle
- Medullary ray
- ?

What are the foot processes on podocytes?

- +Pedicels
- Visceral layer of Bowman's capsule
- Parietal layer of Bowman's capsule
- Juxtaglomerular cells
- Macula densa
- ?

What vessel is a branch of the interlobular artery?

- +Afferent arteriole
- Efferent arteriole
- Capillary tuft
- Peritubular capillaries
- Vasa recta
- ?

What type of tissue lines the bladder?

- +Transitional epithelium
- Simple squamous epithelium
- Simple cuboidal epithelium
- Simple columnar epithelium
- Stratified squamous epithelium
- ?

What is the projection of the medulla into the renal cortex called?

- +Medullary ray
- Medulla
- Lobe
- Renal columns
- Nephron
- ?

The juxtaglomerular cells are located:

- +in the tunica media of afferent and efferent glomerular arterioles
- in the distal tubule between the afferent and efferent glomerular arterioles and the renal corpuscle
- in the space between afferent and efferent arterioles, macula densa
- in the thin limbs of Henle's loop
- ?

The extraglomerular mesangial cells are located:

- +in the space between afferent and efferent arterioles, macula densa
- in the tunica media of afferent and efferent glomerular arterioles
- in the distal tubule between the afferent and efferent arterioles and the renal corpuscle
- in the thin limbs of Henle's loop
- ?

Macula densa is located:

- +in the distal tubule between afferent and efferent arterioles and the renal corpuscle
- in the thin limbs of Henle's loop
- in the space between the afferent and efferent arterioles, macula densa
- in the tunica media of afferent and efferent glomerular arterioles

?

Function of the angiotensin II:

- +increase the blood pressure
- decrease resorption of sodium and chloride ions
- decrease the blood pressure
- increase the luminal diameter of blood vessels

?

The mucous tunic of urinary bladder is composed of:

- +the transitional epithelium and lamina propria
- the transitional epithelium, lamina propria and muscular lamina
- only transitional epithelium
- the pseudostratified ciliated epithelium and lamina propria

?

The muscular tunic of urinary bladder is composed of:

- +internal and external - longitudinal, middle - circulatory layers of smooth muscle cells
- internal and external - circulatory, middle - longitudinal layers of smooth muscle cells
- internal and external - longitudinal, middle - circulatory layers of transverse-striated muscle cells
- internal and external - circulatory, middle - longitudinal layers of transverse-striated muscle cells

?

The muscular tunic of ureter is composed of:

- +external - circulatory, internal - longitudinal layers of smooth muscle cells
- external - longitudinal, internal - circulatory layers of smooth muscle cells
- external - circulatory, internal - longitudinal layers of transverse-striated muscle cells
- external - longitudinal, internal - circulatory layers of transverse -striated muscle cells

?

What is opened into the renal pelvis:

- +major calyx
- minor calyx
- renal papilla
- medullary rays

?

What is located in the renal columns:

- +interlobar arteries and interlobar veins
- peritubular capillary network
- afferent and efferent glomerular arterioles
- arcuate arteries

?

Name components of the Kidney endocrine system:

- +macula densa, juxtaglomerular cells, extraglomerular mesangial cells
- macula densa and renal corpuscle
- juxtaglomerular cells and extraglomerular mesangial cells
- extraglomerular mesangial cells and glomerulus

?

Enzyme RENIN is produced by:

- +juxtaglomerular cells
- extraglomerular mesangial cells
- glomerulus
- macula densa

?

Function of the macula densa:

- +regulate the level of Na⁺ concentration
- decrease reabsorption of sodium and chloride ions

- creat acidic nature of urine
 - reduce Ca level in the blood
- ?

What structure is in the middle of the hepatic lobule?

- +Central vein
 - Hepatic artery
 - Portal triad
 - Portal vein
 - Sinusoids
- ?

What is the space between the liver sinusoids and the hepatocytes called?

- +Space of Disse
 - Space of Mall
 - Vacuole
 - Lacuna
 - Howship's lacuna
- ?

Which structures are part of the portal triad?

- +Portal vein and hepatic artery
 - Central vein
 - Sinusoids
- ?

Which of the following is NOT a function of the liver?

- +Storage of calcium
 - Metabolism of bilirubin
 - Deamination of amino acids
 - Storage of iron
 - Storage of copper
- ?

What is the functional unit of the liver?

- +Lobule
 - Portal triad
 - Central vein
 - Hepatocyte
 - Sinusoids
- ?

Hepatic lobule consists of:

- +hepatic girders and lobular sinusoid hemocapillaries
 - hepatic girders and bile capillaries
 - hepatic acinus and central vein
 - hepatic acinus and lobular sinusoid hemocapillaries
- ?

Hepatic girder consists of:

- +two rows of hepatocytes and bile capillary, which is located between them
 - two rows of hepatocytes and sinusoid capillary, which is located between them
 - hepatic acinus and central vein
 - hepatic acinus and lobular sinusoid hemocapillary, which is located between them
- ?

Bile is synthesized by:

- +Golgi complex
- peroxisome
- granular endoplasmic reticulum

-agranular endoplasmic reticulum

?

According to the classic presentations structural and functional unit of the liver is:

+hepatic lobule

-portal lobule

-hepatic acinus

-hepatic girder

?

Name cells, which form the wall of bile capillaries:

+hepatocytes

-endotheliocytes

-epitheliocytes

-reticulocytes

?

Name functions of the hepatocyte granular endoplasmic reticulum:

+synthesis of blood proteins and enzymes

-glycogen synthesis

-bile excretion

-oxydation of fatty acids, detoxification of ethanol

?

Name functions of the hepatocyte peroxisomes:

+oxydation of fatty acids, detoxification of ethanol

-synthesis of blood proteins and enzymes

-bile excretion

-glycogen synthesis

?

Name hepatocyte organell, which participates in the glycogen synthesis:

+agranular endoplasmic reticulum

-Golgi complex

-peroxisome

-granular endoplasmic reticulum

?

Name structure, which is located in the center of the portal lobule:

+triada

-central vein

-hepatic acinus

-hepatic girder

?

Blood capillaries in the composition of the hepatic lobule run:

+between girders

-inside hepatic girder

-between hepatic acinuses

-between hepatic acinus and girder

?

Stromal component of lymph nodes consists of:

+reticular cells, collagenous and reticular fibers, macrophages

-reticular cells, adipocytes, megakariocytes

-cells myeloid and lymphoid series

-T-lymphocytes, B-lymphocytes, vessels and nerves

?

Lymphatic nodules (follicles) are covered:

+reticuloendothelial cells, lying on the reticular fibers

- reticuloendothelial cells, lying on the elastic membrane
 - epithelioreticular cells, lying on the basement membrane
 - epithelioreticular cells, lying on the elastic fibers
- ?

Cortical substance of lymph node is composed:

- +lymph nodules
 - lymphatic sinuses
 - bands of lymphoid tissue
 - interdigitating cells and T-lymphocytes
- ?

Function of macrophages in the lymphatic nodules:

- +change antigens from corpuscular form to molecular one
 - transfer antibodies from molecular form to corpuscular one
 - transfer antigens from molecular form to corpuscular one
 - transfer T-lymphocytes into B-lymphocytes
- ?

Plasmatic cells are formed from:

- +B-lymphocytes
 - monocytes
 - T-lymphocytes
 - macrophages
- ?

Function of plasmatic cells is:

- +synthesis of antibodies
 - synthesis of antigens
 - transfer antigens from molecular form to corpuscular one
 - transfer T-lymphocytes into B-lymphocytes
- ?

Function of lymphatic nodules:

- +antigen - dependent proliferation and differentiation of B-lymphocytes occur
 - antigen - dependent proliferation and differentiation of T-lymphocytes occur
 - antigen - independent proliferation and differentiation of B-lymphocytes occur
 - antigen - independent proliferation and differentiation of T-lymphocytes occur
- ?

Paracortical zone consists of:

- +interdigitating cells and T-lymphocytes
 - lymphatic sinuses
 - lymph nodules
 - T-lymphocytes and B-lymphocytes
- ?

Function of paracortical zone is:

- +antigen - dependent proliferation and differentiation of T-lymphocytes
 - antigen - independent proliferation and differentiation of T-lymphocytes
 - antigen - dependent proliferation and differentiation of B-lymphocytes
 - antigen - independent proliferation and differentiation of B-lymphocytes
- ?

T-lymphocytes differentiation into:

- +T-memory, T-killers, T-supressors and T-helpers
 - T-killers, T-supressors and plasmatic cells
 - interdigitating cells and B-lymphocytes
 - T-memory, T-killers, trombocytes and T-helpers
- ?

Subcapsula sinus is located:

- +between the node capsule and lymphatic nodules
 - between trabecules and follicles
 - between trabecules and medullary bands
 - between paracortical zone and cortical substance
- ?

Medullary sinuses are located:

- +between trabecules and medullary bands
 - between trabecules and follicles
 - between the node capsule and lymphatic nodules
 - between paracortical zone and cortical substance
- ?

Intermediate sinuses are located:

- +between trabecules and follicles
 - between the node capsule and lymphatic nodules
 - between trabecules and medullary bands
 - between paracortical zone and cortical substance
- ?

Parenchyma of the spleen is composed:

- +white and red pulp
 - white and black pulp
 - cortical and medullary substances
 - cortical and paracortical zones
- ?

Name cells, which DOES NOT present in lymphatic nodules of spleen:

- +epithelioreticular cells
 - T-lymphocytes
 - B-lymphocytes
 - Plasmocytes
- ?

Function of periarterial zone:

- +antigen - dependent proliferation and differentiation of T-lymphocytes occur
 - antigen - dependent proliferation and differentiation of B-lymphocytes occur
 - antigen - independent proliferation and differentiation of B-lymphocytes occur
 - antigen - independent proliferation and differentiation of T-lymphocytes occur
- ?

Function of germinal centre:

- +antigen - dependent proliferation and differentiation of B-lymphocytes occur
 - antigen - dependent proliferation and differentiation of T-lymphocytes occur
 - antigen - independent proliferation and differentiation of B-lymphocytes occur
 - antigen - independent proliferation and differentiation of T-lymphocytes occur
- ?

Periarterial zone consists of:

- +interdigitating cells and T-lymphocytes
 - lymphatic sinuses
 - T-lymphocytes and B-lymphocytes
 - plasmocytes and B-lymphocytes
- ?

Mantle zone consists of:

- +T-lymphocytes, plasmocytes, macrophages and B-lymphocytes
- interdigitating cells and T-lymphocytes
- lymphatic sinuses

-erythrocytes, thrombocytes and monocytes

?

What type of capillaries are located in the marginal zone?

+sinusoid capillaries

-fenestrated capillaries

-capillaries with continuous endothelial lining

-capillaries with continuous endothelial lining and fenestrated capillaries

?

Name function, which splenic red pulp DOES NOT perform?

+formation of formed blood elements

-depositing of mature blood elements

-destroying of aged and injured erythrocytes and thrombocytes

-monocytes differentiate into macrophages

?

Function of the splenic white pulp is:

+antigen - dependent proliferation and differentiation of B-lymphocytes and T- lymphocytes

-depositing of mature blood elements

-destroying of aged and injured erythrocytes and thrombocytes

-monocytes differentiate into macrophages

?

Open blood supply is:

+flow of blood from capillaries directly into reticular tissue

-flow of blood from capillaries into venous sinuses

-flow of blood from capillaries to central artery

-flow of blood from capillaries to penicillary arterioles

?

Close blood supply is:

+flow of blood from capillaries into venous sinuses

-flow of blood from capillaries directly into reticular tissue

-flow of blood from capillaries to central artery

-flow of blood from capillaries to penicillary arterioles

?

What is another term for lymphatic nodules?

+Lymph follicles

-White pulp

-Peyer's patches

-Lymph node

-Diffuse lymphatic tissue

?

What is another name for a splenic nodule?

+Malpighian corpuscle

-Trabeculae

-White pulp

-Red pulp

-Cords of Billroth

?

What is the term for the entire lymphatic region of the spleen?

+White pulp

-Malpighian corpuscle

-Trabeculae

-Red pulp

-Cords of Billroth

?

Which of the following is NOT a function of the spleen?

+All of the following are functions of the spleen

-Destruction of red blood cells

-Lymphocyte production

-Storage of blood

-Fetal blood cell formation

?

When looking at a lymph node, where are lymphatic nodules?

+Outer cortex

-Deep cortex

-Tertiary cortex

-Juxtamedullary cortex

-Paracortical zone

?

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 - between the node capsule and lymphatic nodules
 - between trabecules and medullary bands
 - between paracortical zone and cortical substance
- ?

How many seminiferous tubules are found in each testis of an average man?

- +400-600
 - 4-6
 - 40-60
 - 4000-6000
 - 40,000-60,000
- ?

Which of the following are produced by the Leydig cells?

- +Testosterone
- Inhibin
- Androgen binding protein

?

Which of the following is NOT considered part of the male genital duct system?

- +Seminal vesicles
- Rete testis
- Tubuli recti
- Ductus deferens
- Ductus epididymidis

?

What is the surface modification seen on the cells of the epididymis?

- +Stereocilia
- Microvilli
- Cilia
- Keratinization

?

What type of hormone is testosterone?

- +Steroid
- Protein
- Amino acid chain
- Catecholamine

?

Which of the following is true?

- +There are two corpora cavernosa and one corpus spongiosum
- There is one corpus cavernosa and one corpus spongiosum
- There is one corpus cavernosa and two corpora spongiosum
- There are two corpora cavernosa and two corpora spongiosum
- There are four corpora cavernosa and two corpora spongiosum

?

What gland in the male is homologous to the greater vestibular gland in the female?

- +Cowper's gland
- Bartholin's gland
- Prostate gland
- Skene's gland
- Brunner's gland

?

What is the most commonly seen type of epithelium in the prostate?

- +Simple columnar
- Transitional
- Stratified squamous
- Simple squamous
- Simple cuboidal

?

What type of epithelium lines the epididymis?

- +Pseudostratified
- Simple columnar
- Stratified squamous
- Simple squamous
- Simple cuboidal

?

Spermatozoa are formed in:

- +seminiferous tubules
- rete testis

-ductuli efferentes

-epididymis

?

The epididymis is composed of:

+ductuli efferentes and ductus epididymis

-rete testis

-tubuli recti

-ductus deferens and ductus epididymis

?

Name component, which DOES NOT form the wall of seminiferous tubule:

+submucous base

-tunica propria

-basal lamina

-seminiferous epithelium

?

The seminiferous epithelium is composed of:

+Sertoli cells and spermatogenic cells

-cells of Leydig and spermatogenic cells

-Sertoli cells and cells of Leydig

-monolayer squamous epithelium

?

Name cells, which are located in the basal compartment of the seminiferous tubule:

+spermatogonia

-spermatids

-spermatozoa

-secondary spermatocytes

?

Name cells, which are located in the adluminal compartment of the seminiferous tubule:

+primary and secondary spermatocytes, spermatids and spermatozoa

-spermatogonia, primary spermatocytes, spermatids, and spermatozoa

-Sertoli cells, cells of Leydig and spermatozoa

-Sertoli cells and spermatogonia

?

Name function, which Sertoli cells DOES NOT perform:

+delivers semen to the female reproductive tract

-nutritional support of the developing germ cells

-phagocytosis of cytoplasm eliminated of the developing germ cells

-synthesis and release of androgen-binding protein

?

Function of the dark type-A spermatogonia:

+reserve cells

-divide mitotically to give rise to primary spermatocytes

-divide mitotically to give rise to primary spermatids

-induced by testosterone to proliferate

?

Function of the pale type-A spermatogonia:

+induced by testosterone to proliferate

-divide mitotically to give rise to primary spermatocytes

-divide mitotically to give rise to primary spermatids

-reserve cells

?

Function of the type-B spermatogonia:

+divide mitotically to give rise to primary spermatocytes

-reserve cells

-divide mitotically to give rise to primary spermatids

-induced by testosterone to proliferate

?

Function of the diakinesis:

+exchanges segments (crossingover) of homologous chromosomes

-chromosomes begin to condense, forming long threads

-homologous pairs of chromosomes recognizable as tetrads (chromatids)

-begins the formation of the homologous pairs of chromosomes

?

Function of the pachytene:

+homologous pairs of chromosomes recognizable as tetrads (chromatids)

-exchanges segments (crossingover) of homologous chromosomes

-chromosomes begin to condense, forming long threads

-begins the formation of the homologous pairs of chromosomes

?

Function of the zygotene:

+begins the formation of the homologous pairs of chromosomes

-chromosomes begin to condense, forming long threads

-homologous pairs of chromosomes recognizable as tetrads (chromatids)

-exchanges segments (crossingover) of homologous chromosomes

?

How many chromosomes and chromatids primary spermatocytes include?

+46 chromosomes and 92 chromatids

-46 chromatids and 92 chromosomes

-96 chromosomes and 23 chromatids

-23 chromosomes and 46 chromatids

?

How many chromatids secondary spermatocytes include?

+46 chromatids and 23 chromosomes

-96 chromosomes and 43 chromatids

-92 chromatids and 46 chromosomes

-23 chromatids and 46 chromosomes

?

How many chromatids spermatids include?

+23 chromatids and 23 chromosomes

-46 chromosomes and 46 chromatids

-92 chromatids and 46 chromosomes

-96 chromosomes and 43 chromatids

?

Function of the spermatocytogenesis:

+differentiation of spermatogonia into primary spermatocytes

-transformation of spermatids into spermatozoa

-differentiation of spermatogonia into spermatids

-reduction division and forming haploid spermatids

?

Function of the spermiogenesis:

+transformation of spermatids into spermatozoa

-reduction division and forming haploid spermatids

-differentiation of spermatogonia into primary spermatocytes

-differentiation of spermatogonia into spermatids

?

Function of the meiosis:

- +reduction division and forming of haploid spermatids
- reduction division and forming of diploid spermatids
- transformation of spermatids into spermatozoa
- differentiation of spermatogonia into primary spermatocytes

?

Function of Leydig's cells:

- +produce the hormone testosterone
- produce the hormone estrogens
- produce the hormone progesterone
- nutritional support of the developing germ cells

?

The rete testis consists of:

- +simple cuboidal epithelium with numerous short microvilli
- simple epithelium with nonciliated cuboidal cells and ciliated columnar cells
- pseudostratified epithelium
- seminiferous epithelium

?

The ductuli efferentes consists of:

- +simple epithelium with nonciliated cuboidal cells and ciliated columnar cells
- pseudostratified epithelium
- seminiferous epithelium
- simple cuboidal epithelium with numerous short microvilli

?

The ductus deferens consists of:

- +the mucous tunic, the smooth muscle tunic and adventitial tunic
- the mucous tunic and submucous base
- the mucous tunic, the transverse-striated muscular tunic and adventitial tunic
- the mucous tunic, the smooth muscle tunic and serous tunic

?

Where is masticatory mucosa found?

- +Hard palate
- Tongue underside
- Soft palate
- Lips
- Cheek

?

What is the surface layer of masticatory mucosa composed of?

- +Nonkeratinized stratified squamous epithelium and keratinized stratified squamous epithelium
- Simple squamous epithelium
- Pseudostratified squamous epithelium

?

Which layer is NOT present in masticatory epithelium?

- +Stratum lucidum
- Stratum basale
- Stratum spinosum
- Stratum granulosum
- Stratum corneum

?

Which type of papillae on the tongue is the most abundant?

- +Filiform papillae

-Circumvallate papillae

-Fungiform papillae

-Foliate papillae

-All of the above

?

Which type of papillae on the tongue is not well developed in man?

+Foliate papillae

-Filiform papillae

-Circumvallate papillae

-Fungiform papillae

-All of the above

?

What is Not structure feature of the mucous tunic oral cavity?

+muscular lamina is present

-epithelium - stratified flat nonkeratinizing, here and there keratinizing

-lamina propria forms papilla, extending into the epithelium

-muscular lamina is absent

?

How many parts do lips contain?

+three parts

-two parts

-five parts

-four parts

?

Name parts which are present in lips:

+the skin part, intermediate part (red border), the mucous part

-the skin part, lamina propria, the mucous part

-elastic lamina, intermediate part (red border), lamina propria

-the skin part, intermediate part (red border), basal membrane

?

Name type of epithelium which covers the skin part of the lips:

+stratified squamous keratinizing epithelium

-stratified squamous nonkeratinizing epithelium

-stratified transitional epithelium

-pseudostratified epithelium

?

Name type of epithelium which covers the intermediate part of the lips:

+keratinizing epithelium

-stratified squamous nonkeratinizing epithelium

-stratified transitional epithelium

-pseudostratified epithelium

?

Name type of epithelium which covers the mucous part of the lips:

+stratified squamous nonkeratinizing epithelium

-stratified transitional epithelium

-pseudostratified epithelium

-keratinizing epithelium

?

Name type of epithelium which forms the external surfaces of the cheeks:

+stratified squamous keratinizing epithelium

-stratified transitional epithelium

-pseudostratified epithelium

-stratified squamous nonkeratinizing epithelium

?

Name type of epithelium which forms the internal mucous surfaces of the cheeks:

+stratified squamous nonkeratinizing epithelium

-stratified transitional epithelium

-pseudostratified epithelium

-stratified squamous keratinizing epithelium

?

Name zone in which the salivary glands in the cheeks are absent:

+intermediate zone of the mucous

-maxillary zone of the mucous

-mandibular zone of the mucous

-external skin surfaces

?

Name structural components which are absent in the gums:

+the submucous base

-epithelium

-lamina propria

-mucous tunic

?

Name type of epithelium which covers the posterior surface of the soft palate:

+monolayer ciliated epithelium

-stratified transitional epithelium

-pseudostratified epithelium

-stratified squamous nonkeratinizing epithelium

?

Name type of epithelium which covers the anterior surface of the soft palate:

+stratified squamous nonkeratinizing epithelium

-stratified transitional epithelium

-pseudostratified epithelium

-monolayer ciliated epithelium

?

How many types of papillae are present in tongue:

+four

-two

-five

-three

?

Name papillae which have common sensitivity function:

+filiformes papillae

-foliates papillae

-fungiformes papillae

-vallates papillae

?

Taste buds consist of:

+taste (sensory), supporting, basal cells

-taste (sensory), supporting, common sensitivity cells

-supporting, common sensitivity cells, basal cells

-basal cells, mucous cells, common sensitivity cells

?

Where is insulin secreted from?

+Beta cells

- Alpha cells
- Gamma cells
- Delta cells
- Acini

?

What structure is in the middle of the hepatic lobule?

- +Central vein
- Hepatic artery
- Portal triad
- Portal vein
- Sinusoids

?

What is the space between the liver sinusoids and the hepatocytes called?

- +Space of Disse
- Space of Mall
- Vacuole
- Lacuna
- Howship's lacuna

?

Which structures are part of the portal triad?

- +Portal vein and hepatic artery
- Central vein
- Sinusoids

?

Which of the following is NOT a function of the liver?

- +Storage of calcium
- Metabolism of bilirubin
- Deamination of amino acids
- Storage of iron
- Storage of copper

?

What is the functional unit of the liver?

- +Lobule
- Portal triad
- Central vein
- Hepatocyte
- Sinusoids

?

Which of the following is the exocrine portion of the pancreas?

- +Acini
- Islets of Langerhans
- Alpha cells
- Beta cells
- Delta cells

?

What is the name of the cellular mass for the endocrine portion of the pancreas?

- +Islets of Langerhans
- Alpha cells
- Beta cells
- Delta cells
- Acini

?

What cells of the pancreas secrete somatostatin?

+Delta cells

-Islets of Langerhans

-Alpha cells

-Beta cells

-Gamma cells

?

Function of the Acinocytes:

+secretion of enzymes in inactive form

-producing of bicarbonate

-producing of somatostatin

-producing of vasoactive intestinal polypeptide

?

Function of the Centroacinar cells:

+producing of bicarbonate

-synthesize hydrogen and chlorine ions

-secretion of enzymes in inactive form

-producing of somatostatin

?

Intercalated duct is composed of:

+monolayer squamous epithelium

-stratified cuboidal epithelium

-monolayer prismatic epithelium

-monolayer cuboidal epithelium

?

Intralobular duct is composed of:

+monolayer cuboidal epithelium

-stratified cuboidal epithelium

-monolayer prismatic epithelium

-stratified squamous epithelium

?

Interlobular duct is composed of:

+monolayer prismatic epithelium

-stratified squamous epithelium

-stratified cuboidal epithelium

-monolayer cuboidal epithelium

?

Function of the glucagon:

+increase of glucose level in blood

-decrease of glucose level in blood

-stimulates secretion of gastric and pancreatic juice

-depresses secretion of gastric and pancreatic juice

?

Function of the insulin:

+decrease of glucose level in blood

-stimulates secretion of gastric and pancreatic juice

-increase of glucose level in blood

-depresses secretion of gastric and pancreatic juice

?

Function of the somatostatin:

+depresses secretion of insulin and glucagon

- stimulates secretion of gastric and pancreatic juice
 - stimulates secretion of insulin and glucagon
 - increase of glucose level in blood
- ?

Function of the vasoactive intestinal polypeptide:

- +stimulates secretion of pancreatic juice
 - increase of glucose level in blood
 - depresses secretion of insulin and glucagon
 - depresses secretion of pancreatic juice
- ?

Name cells, which produce pancreatic polypeptide:

- +PP - cells
 - A - cells
 - D1 - cells
 - B - cells
- ?

Name cells, which produce vasoactive intestinal polypeptide:

- +D1 - cells
 - D - cells
 - PP - cells
 - B - cells
- ?

Name cells, which produce insulin:

- +B - cells
 - D - cells
 - PP - cells
 - D1 - cells
- ?

Name cells, which produce glucagon:

- +A - cells
 - D1 - cells
 - B - cells
 - PP - cells
- ?

Name cells, which produce somatostatin:

- +D - cells
 - D1 - cells
 - PP - cells
 - A - cells
- ?

Hepatic lobule consists of:

- +hepatic girders and lobular sinusoid hemocapillaries
 - hepatic girders and bile capillaries
 - hepatic acinus and central vein
 - hepatic acinus and lobular sinusoid hemocapillaries
- ?

Hepatic girder consists of:

- +two rows of hepatocytes and bile capillary, which is located between them
 - two rows of hepatocytes and sinusoid capillary, which is located between them
 - hepatic acinus and central vein
 - hepatic acinus and lobular sinusoid hemocapillary, which is located between them
- ?

Bile is synthesized by:

- +Golgi complex
- peroxisome
- granular endoplasmic reticulum
- agranular endoplasmic reticulum
- ?

According to the classic presentations structural and functional unit of the liver is:

- +hepatic lobule
- portal lobule
- hepatic acinus
- hepatic girder
- ?

Name cells, which form the wall of bile capillaries:

- +hepatocytes
- endotheliocytes
- epitheliocytes
- reticulocytes
- ?

Name functions of the hepatocyte granular endoplasmic reticulum:

- +synthesis of blood proteins and enzymes
- glycogen synthesis
- bile excretion
- oxydation of fatty acids, detoxification of ethanol
- ?

Name functions of the hepatocyte peroxisomes:

- +oxydation of fatty acids, detoxification of ethanol
- synthesis of blood proteins and enzymes
- bile excretion
- glycogen synthesis
- ?

Name hepatocyte organell, which participates in the glycogen synthesis:

- +agranular endoplasmic reticulum
- Golgi complex
- peroxisome
- granular endoplasmic reticulum
- ?

Name structure, which is located in the center of the portal lobule:

- +triada
- central vein
- hepatic acinus
- hepatic girder
- ?

Blood capillaries in the composition of the hepatic lobule run:

- +between girders
- inside hepatic girder
- between hepatic acinuses
- between hepatic acinus and girder
- ?

Where do T lymphocytes gain their immunocompetence?

- +Thymus
- Thyroid
- Bursa of Fabricus

-Bone marrow

-Lymph node

?

Which of the following is NOT made of a framework of reticular fibers?

+Thymus

-Bone marrow

-Lymph node

-Spleen

-None of the above

?

Antibodies are:

+proteins, which are synthesized by plasmatic cells and destruct antigens

-organic components, capable to destruct organism

-organic component, capable to destruct of embryo

-proteins, which functions are synthesis of cancer cells

?

Antigens are:

+organic components, capable to destruct organism

-proteins, which function is to synthesize cancer cells

-proteins, which are synthesized by plasmatic cells and destruct antigens

-organic components, which are synthesized by B-lymphocytes

?

Central organs of immune system are:

+organs, which serve the processes of antigen - independent proliferation and differentiation of lymphocytes

-organs, which serve the processes of antigen - dependent proliferation and differentiation of lymphocytes

-organs, which capable to destruct organism

-organs, which capable to generate the electric impulses

?

Peripheral organs of immune system are:

+organs, which serve the processes of antigen - dependent proliferation and differentiation of lymphocytes

-organs, capable to destruct organism

-organs, which serve the processes of antigen - independent proliferation and differentiation of lymphocytes

-organs, which capable to generate the electric impulses

?

Stromal component of red bone marrow consists of:

+reticular cells, adipocytes, macrophages

-megakariocytes, elastic fibers

-cells of myeloid and lymphoid series

-vessels and nerves

?

Hemopoietic component of red bone marrow consists of:

+cells of myeloid and lymphoid series

-reticular cells, adipocytes, macrophages

-megakariocytes, elastic fibers

-vessels and nerves

?

Name type of capillaries, which are present in the red bone marrow:

+sinusoid

-fenestrated

-capillaries with continuous endothelial lining

-fenestrated and capillaries with continuous endothelial lining

?

Function of the megakaryocytes in the red bone marrow:

+formation of trombocytes

-synthesis of hemoglobin

-destruction of trombocytes

-phagocytosis

-synthesis of antibodies

?

Name component, which does NOT enter in hemato-thymic barrier:

+reticuloendothelial cells

-capillary endothelium

-pericapillary space, containing macrophages

-epithelioreticular cells

?

Hassal`s bodies are represented by:

+keratinized epithelioreticular cells

-keratinized reticuloendothelial cells

-B - lymphocytes

-T - lymphocytes

?

Function of the cortical substance in the red bone marrow:

+maturation of T - lymphocytes

-maturation of B - lymphocytes

-maturation of T - lymphocytes and B - lymphocytes

-formation of trombocytes

?

Stromal component of the thymus consists of:

+epithelioreticular cells

-reticuloendothelial cells

-B - lymphocytes and T - lymphocytes

-megakaryocytes, elastic fibers

?

Which cell is a respiratory macrophage?

+Dust cell

-Kupffer cells

-Histiocyte

-Langerhans cell

-Microglia

?

Which cell is a type of neuron?

+Olfactory cells

-Basal cells

-Brush cells

-Sustentacular cells

-All of the above

?

What cell types are found in the respiratory mucosa?

+All of the following

-Ciliated cells

-Goblet cells

-Basal cells

-Brush cells

?

What type of tissue makes up the epiglottis?

+Elastic cartilage

-Compact bone

-Spongy bone

-Hyaline cartilage

-Fibrocartilage

?

What is the smallest airspace of the respiratory tree?

+Alveoli

-Alveolar duct

-Alveolar sac

-Respiratory bronchiole

-Terminal bronchiole

?

What type of epithelium lines the trachea?

+Pseudostratified epithelium

-Simple squamous epithelium

-Simple cuboidal epithelium

-Simple columnar epithelium

-Stratified squamous epithelium

?

Which structure is part of the conducting portion of the airway?

+Bronchi

-Alveolar ducts

-Alveoli

-Alveolar sacs

-Respiratory bronchioles

?

What type of epithelium lines the vestibule?

+Stratified squamous epithelium

-Simple squamous epithelium

-Simple columnar epithelium

-Ciliated pseudostratified epithelium with goblet cells

-Transitional epithelium

?

Function of the Clara cells:

+produce surfactant

-stimulate the proliferation of lymphocytes

-produce bicarbonate

-produce mucus

?

Function of the Dendrite cells:

+stimulate the proliferation of lymphocytes

-produce surfactant

-absorb the mucous components

-produce mucus

?

Where are the Goblet cells absent?

+in the terminal bronchioles

-in the small bronchi

-in the middle bronchi

-in the trachea

?

Where are the Clara cells present?

+in the terminal bronchioles

-in the middle bronchi

-in the trachea

-in the small bronchi

?

Respiratory bronchioles consist of:

+Clara cells, ciliated cells; partially, their wall is composed of alveoles

-alveoles, between which the bundles of smooth muscle cells are located

-ciliated, cells without cilia and Clara cells

-receptor, supporting and basal cells

?

Alveolar passage is composed of:

+alveoles, between which the bundles of smooth muscle cells are located

-ciliated, cells without cilia, and Clara cells

-receptor, supporting and basal cells

-Clara cells, ciliated cells; partially, their wall is composed of alveoles

?

Name component, which DOES NOT form aerohaematic barrier:

+cytoplasm of the alveolar cell Type II

-cytoplasm of the alveolar cell Type I

-cytoplasm of capillary endotheliocytes

-surfactant layer

?

Olfactory epithelium of the nasal cavity consists of:

+receptor, supporting and basal cells

-ciliated, cells without cilia, and Clara cells

-cells without cilia, dendrite cells, Clara cells and basal (low intercalated) cells

-basal (low intercalated) cells, ciliated cells, goblet cells and endocrine cells

?

Vocal cords are lined by:

+multilayer flat non-keratinized epithelium

-multilayer keratinized epithelium

-pseudostratified prismatic, ciliated epithelium

-pseudostratified cuboidal, ciliated epithelium

?

The trachea wall consists of:

+mucous membrane, fibro-cartilaginous membrane and adventitial membrane

-mucous membrane, submucous base, muscular tunic and adventitial membrane

-mucous membrane, submucous base, muscular tunic and serous tunic

-mucous membrane, fibro-cartilaginous membrane and serous tunic

?

The epithelium of trachea consists of:

+ciliated, goblet, endocrine and basal cells

-cells without cilia, dendrite cells, Clara cells and basal cells

-ciliated, cells without cilia, and Clara cells

-ciliated, cells without cilia, and dendrite cells

?

The large bronchi are characterized by:

- +muscular bands form complete rings; hyaline cartilage is as laminae, glands are numerous
- hyaline cartilages are almost complete rings, muscular tissue in a small quantity
- powerful development of the circular bundles of smooth muscle cells, absent glands
- muscular cells form big bundles, glands are lie between the islands of elastic cartilage

?

The small bronchi are characterized by:

- +powerful development of the circular bundles of smooth muscle cells, absent glands
- hyaline cartilages are almost complete rings, muscular tissue in a small quantity
- muscular cells form big bundles, glands are lie between the islands of elastic cartilage
- muscular bands form complete rings; hyaline cartilage is as laminae, glands are numerous

?

The middle bronchi are characterized by:

- +muscular cells form big bundles, glands are lie between the islands of elastic cartilage
- powerful development of the circular bundles of smooth muscle cells, absent glands
- hyaline cartilages are almost complete rings, muscular tissue in a small quantity
- muscular bands form complete rings; hyaline cartilage is as laminae, glands are numerous

?

The main bronchi are characterized by:

- +hyaline cartilages are almost complete rings, muscular tissue in a small quantity
- muscular cells form big bundles, glands are lie between the islands of elastic cartilage
- muscular bands form complete rings; hyaline cartilage is as laminae, glands are numerous
- powerful development of the circular bundles of smooth muscle cells, absent glands

?

Name cells, which are present in Parotid gland:

- +serocytes, myoepithelial cells
- myoepithelial cells, mucocytes
- mucocytes, serocytes, myoepithelial cells
- serocytes, mucocytes

?

Name cells, which are present in Submandibular gland:

- +mucocytes, serocytes, myoepithelial cells
- serocytes, myoepithelial cells
- serocytes, mucocytes
- myoepithelial cells, mucocytes

?

Name cells, which are present in Sublingual gland:

- +mucocytes, serocytes, myoepithelial cells
- myoepithelial cells, mucocytes
- serocytes, myoepithelial cells
- serocytes, mucocytes

?

Name terminal parts, which Parotid gland contains:

- +albuminous
- mixed, mucous and albuminous
- albuminous and mixed
- mixed and mucous

?

Name terminal parts, which Sublingual gland contains:

- +mixed, mucous and albuminous
- albuminous and mixed
- mucous
- mucous and albuminous

?

Name terminal parts, which Submandibular gland contains:

- +albuminous and mixed
- mixed, mucous and albuminous
- mixed and mucous
- mucous and albuminous

?

Stroma of glands consists of:

- +capsule, interlobular trabecules and intralobular connective tissue
- capsule and system of excretory ducts
- terminal parts and system of excretory ducts
- interlobular and intralobular trabecules

?

Parenchyma of glands consists of:

- +terminal parts and system of excretory ducts
- capsule and system of excretory ducts
- capsule, interlobular trabecules and intralobular connective tissue
- interlobular and intralobular trabecules

?

Intercalated ducts consists of:

- +monolayer squamous or cuboidal cells
- stratified cuboidal or squamous epithelial
- prismatic cells
- cuboidal or prismatic cells

?

Interlobular ducts consists of:

- +prismatic cells
- stratified cuboidal or squamous epithelial
- cuboidal or prismatic cells
- monolayer squamous or cuboidal cells

?

Common excretory duct is represented by:

- +stratified cuboidal or squamous epithelial
- monolayer squamous or cuboidal cells
- cuboidal or prismatic cells
- prismatic cells

?

Interlobular trabecules consist of:

- +loose fibrous connective tissue
- dense fibrous connective tissue
- epithelial tissue
- smooth muscle tissue

?

Anatomically, the nervous system is divided into:

- +central and peripheral
- somatic and vegetative
- somatic and peripheral
- vegetative and central

?

Physiologically, the nervous system is divided into:

- +somatic and vegetative
- central and peripheral

-central and vegetative

-somatic and peripheral

?

Central nervous system includes:

+the brain and spinal cord

-ganglia, nerves, nerve endings

-spinal cord and cerebrospinal ganglion

-nerves and nerve endings

?

Peripheral nervous system includes:

+ganglia, nerves, nerve endings

-the brain and spinal cord

-spinal cord and cerebrospinal ganglion

-the brain and nerves

?

The axons of motor neurons in anterior horns of spinal cord enter in the composition of:

+anterior roots of spinal cord

-posterior roots of spinal cord

-lateral roots of spinal cord

-posterior horns of spinal cord

?

Proper nucleus of the posterior horns and thoracic nucleus are composed by:

+multipolar associative neurons

-multipolar motor neurons

-pseudounipolar sensory neurons

-multipolar sensory neurons

?

Localization of the lateral intermediate nucleus:

+in lateral horns of spinal cord

-in anterior horns of spinal cord

-in posterior horns of spinal cord

-in anterior roots of spinal cord

?

The lateral intermediate nucleus is formed by:

+multipolar associative neurons of the vegetative nervous system

-multipolar sensory neurons of the somatic nervous system

-multipolar motor neurons of the somatic nervous system

-multipolar sensory neurons of the vegetative nervous system

?

The medial group of nuclei in the anterior horns of spinal cord innervates:

+muscles of the trunk

-limb muscles

-the internal organs, vessels, glands

-body

?

The lateral group of nuclei in the anterior horns of spinal cord innervates:

+limb muscles

-muscles of the trunk

-body

-the internal organs, vessels, glands

?

Name the types of neurons in composition of cerebrospinal ganglion according to the morphological classification:

- +pseudounipolar
- multipolar
- bipolar
- unipolar
- ?

Name the types of neurons in composition of cerebrospinal ganglion according to the functional classification:

- +sensory
- associative
- motor
- motor-sensory
- ?

Parenchyma of the spleen is composed:

- +white and red pulp
- white and black pulp
- cortical and medullary substances
- cortical and paracortical zones
- ?

Name cells, which DOES NOT present in lymphatic nodules of spleen:

- +epithelioreticular cells
- T-lymphocytes
- B-lymphocytes
- Plasmocytes
- ?

Function of periarterial zone:

- +antigen - dependent proliferation and differentiation of T-lymphocytes occur
- antigen - dependent proliferation and differentiation of B-lymphocytes occur
- antigen - independent proliferation and differentiation of B-lymphocytes occur
- antigen - independent proliferation and differentiation of T-lymphocytes occur
- ?

Function of germinal centre:

- +antigen - dependent proliferation and differentiation of B-lymphocytes occur
- antigen - dependent proliferation and differentiation of T-lymphocytes occur
- antigen - independent proliferation and differentiation of B-lymphocytes occur
- antigen - independent proliferation and differentiation of T-lymphocytes occur
- ?

Periarterial zone consists of:

- +interdigitating cells and T-lymphocytes
- lymphatic sinuses
- T-lymphocytes and B-lymphocytes
- plasmocytes and B-lymphocytes
- ?

Mantle zone consists of:

- +T-lymphocytes, plasmocytes, macrophages and B-lymphocytes
- interdigitating cells and T-lymphocytes
- lymphatic sinuses
- erythrocytes, thrombocytes and monocytes
- ?

What type of capillaries are located in the marginal zone?

- +sinusoid capillaries

- fenestrated capillaries
 - capillaries with continuous endothelial lining
 - capillaries with continuous endothelial lining and fenestrated capillaries
- ?

Name function, which splenic red pulp DOES NOT perform?

- +formation of formed blood elements
 - depositing of mature blood elements
 - destroying of aged and injured erythrocytes and thrombocytes
 - monocytes differentiate into macrophages
- ?

Function of the splenic white pulp is:

- +antigen - dependent proliferation and differentiation of B-lymphocytes and T- lymphocytes
 - depositing of mature blood elements
 - destroying of aged and injured erythrocytes and thrombocytes
 - monocytes differentiate into macrophages
- ?

Open blood supply is:

- +flow of blood from capillaries directly into reticular tissue
 - flow of blood from capillaries into venous sinuses
 - flow of blood from capillaries to central artery
 - flow of blood from capillaries to penicillary arterioles
- ?

Close blood supply is:

- +flow of blood from capillaries into venous sinuses
 - flow of blood from capillaries directly into reticular tissue
 - flow of blood from capillaries to central artery
 - flow of blood from capillaries to penicillary arterioles
- ?

Name cells, which are developed from internal enamel epithelium:

- +enameloblasts
 - dentinoblasts
 - cementocytes
 - odontoblasts
- ?

Name dentine zone, which is located in the external part of the crown:

- +interglobular dentine
 - granular layer
 - predentine
 - periodontium
- ?

Name the inner part of dentine:

- +predentine
 - interglobular dentine
 - granular layer
 - periodontium
- ?

Cement is developed from:

- +the inner part of the dental sac
 - the outer part of the dental sac
 - the internal enamel epithelium
 - the outer layer of the dental papillae
- ?

Periodontium is developed from:

- +the outer part of the dental sac
 - the internal enamel epithelium
 - the inner part of the dental sac
 - the outer layer of the dental papillae
- ?

Dentinoblasts are formed from:

- +the outer layer of the dental papillae
 - the outer part of the dental sac
 - the internal enamel epithelium
 - the inner part of the dental sac
- ?

Tooth pulp is developed from:

- +dental papilla
 - dental sac
 - odontoblasts
 - the epithelium of tooth lamina
- ?

Cellular cement:

- +covers the root apex, the cells lie in lacunae
 - covers the whole surface of a tooth roots
 - is located in the external part of the crown
 - joins to the layer of odontoblasts
- ?

The bodies of the dentinoblasts are located:

- +in the peripheral pulp layer
 - in the inner part of the dental sac
 - in the external part of the crown
 - in the dentine granular layer
- ?

Dentine zones are:

- +predentine, interglobular dentine, granular layer
 - granular layer and agranular layer
 - cellular and acellular layer
 - interglobular dentine and predentine
- ?

Tooth pulp is composed of:

- +loose connective tissue with a large amount of vessels and nerves
 - fibrous osseous tissue, but the vessels are absent
 - dense connective tissue with a large amount of vessels and nerves
 - calsified intercellular substance, including collagenous fibers and main substance
- ?

Cuticle is developed from:

- +intermediate epithelium of the pulp enamel organ
 - the outer part of the dental sac
 - the outer layer of the dental papillae
 - internal enamel epithelium
- ?

Types of cement are:

- +cellular and acellular
- granular and agranular
- interglobular and cellular

-interglobular and granular

?

Pre dentine is located:

+in the inner part of dentine, adjacent to the layer of odontoblasts

-in the external part of the crown

-on the whole surface of a tooth roots

-in the outer part of dentine, adjacent to the layer of enameloblasts

?

Which cell type are involved in the secretion thyroglobulin?

+Follicular cells

-Principal cell

-Oxyphil cell

-Parafollicular cells

-Chromaffin cells

?

Name hormone, which is produced by parafollicular cells:

+calcitonin

-thyroxin

-triiodthyronine

-parathyrine

?

Function of the parathyrine:

+activation of the osteoclasts, which release Ca^{2+} and helps its entering into the blood

-reducing of the Ca^{2+} level in the blood by the activation of osteoblasts and osteocyt

-activation of the entire organism growth

-stimulation of endocrine function of adrenal cortex

?

Name hormones, which are produced by follicular cells (thyrocyti):

+thyroxin and triiodthyronine

-calcitonin and thyroxin

-somatostatin and thyroxin

-calcitonin and somatostatin

?

Structural and functional unit of the thyroid gland is:

+follicle

-epithelial band (trabecula)

-lymphatic nodule

-germinal center

?

Name hormone, which is produced by parathyroid gland:

+parathyrine

-calcitonin

-thyroxin

-triiodthyronine

?

Function of the calcitonin:

+reducing of the Ca^{2+} level in the blood by the activation of osteoblasts and osteocyt

-stimulation of endocrine function of adrenal cortex

-activation of the entire organism growth

-activation of the osteoclasts, which release Ca^{2+} and helps its entering into the blood

?

Parenchyma of the thyroid gland consists of:

+follicles and interfollicular islands

-interfollicular islands and capsule from dense fibrous connective tissue

-follicles and trabecules from dense fibrous connective tissue

-interstitial tissue and follicles

?

Biosynthesis of thyroglobulin protein takes place in:

+granular endoplasmic reticulum

-Golgi apparatus

-lysosome

-mitochondria

?

Structural and functional unit of the parathyroid gland is:

+epithelial band (trabecula)

-lymphatic nodule

-germinal center

-follicle

?

Stroma of the thyroid gland consists of:

+interstitial tissue, capsula and trabecules from dense fibrous connective tissue

-follicles and interfollicular islands

-interstitial tissue and follicles

-follicles and trabecules from dense fibrous connective tissue

?

At what level of the vascular tree does gas exchange occur?

+Capillary

-Arteriole

-Venule

-Elastic artery

-Muscular artery

?

In which structure are things moved across the epithelium via pinocytotic vesicles?

+Continuous capillaries

-Fenestrated capillaries

-Sinusoidal capillaries

-AV anastomoses

-Venous sinus

?

What is a thoroughfare which is an intermediate between an arteriole and capillary?

+Metarteriole

-Metcapillary

-Metartery

-Metvenule

-None of the above

?

Which of the following is a distinct structure found specifically in the liver, spleen, and bone marrow?

+Sinusoidal capillaries

-Continuous capillaries

-Fenestrated capillaries

-AV anastomoses

-Venous sinus

?

Arterioles compose of:

+endothelium, lying on the basement membrane, internal elastic lamina, smooth muscle cells and adventitia

-endothelium, lying on the basement membrane, subendothelial layer and plexuses of fibres

-endothelium, lying on the basement membrane, smooth muscle cells and adventitia

-endothelium, pericytes, smooth muscle cells and adventitia

?

Name vessel, in wall of which pores are present:

+sinusoid capillaries

-collecting venules

-fenestrated capillaries

-muscular venules

?

Name vessel, in wall of which one or two layers of smooth muscle cells are present:

+muscular venules

-fenestrated capillaries

-capillaries with continuous endothelial lining

-postcapillaries venules

?

Capillaries with continuous endothelial lining compose of:

+endothelium, basement membrane, pericytes and adventitia

-endothelium, lying on the basement membrane, smooth muscle cells and adventitia

-endothelium, basement membrane, pericytes, pores and adventitia

-endothelium, lying on the basement membrane, subendothelial layer, external elastic membrane

?

Collecting venules compose of:

+smooth muscle cells appear in their wall

-endothelium, basement membrane, pericytes and adventitia

-one to two layers of smooth muscle cells in the middle lamina

-endothelium, basement membrane, pericytes, pores and adventitia

?

Name capillaries, which are presence in endocrine organs:

+fenestrated capillaries

-capillaries with continuous endothelial lining

-precapillaries

-sinusoid capillaries

?

Name anastomose, in subendothelial layer of which smooth muscle cells are present:

+AVA with special contractile elements

-simple AVA

-atypical AVA

?

Atypical AVA consists of:

+a shot vessel, which junctions of arterioles and venules

-contractile element, which is presence in subendothelial layer of vessel

-contractile element, which is presence in middle layer of vessel

-pericytes and adventitia of vessel

?

Name capillaries, which are presence in spleen:

+sinusoid capillaries

-capillaries with continuous endothelial lining

-fenestrated capillaries

-precapillaries

?

Name capillaries, which are present in lungs:

- +capillaries with continuous endothelial lining
- sinusoid capillaries
- fenestrated capillaries
- precapillaries

?

Name organs, which form neurosensory type of visual organs:

- +visual organ and organ of smell
- visual organ and organ of hearing
- visual organ, organ of smell and organ of taste
- organ of hearing, equilibrium and organ of taste

?

Name organs, which form sensory - epithelial type of visual organs:

- +organ of hearing, equilibrium and organ of taste
- visual organ and organ of hearing
- visual organ, organ of equilibrium and organ of taste
- visual organ and organ of smell

?

Photorefracting apparatus consist of:

- +cornea, watery humor, the lens and vitreous body
- cornea, watery humor, the lens and retina
- iris, ciliary body, ciliary zonula
- retina, anterior and posterior chamber

?

Receptor apparatus consist of:

- +retina
- retina, anterior and posterior chamber
- iris, ciliary body, ciliary zonula
- cornea, watery humor, the lens and vitreous body

?

Accommodative apparatus consist of:

- +iris, ciliary body, ciliary zonula
- retina
- cornea, watery humor, the lens and vitreous body
- cornea, the lens, iris, ciliary body, ciliary zonula

?

Function of the photorefracting apparatus:

- +refraction of beams
- changing the form of the lens and focuses an image on the retina
- perception of the light signal
- changing the form of the lens and primary processing of the light signal

?

Function of the accommodative apparatus:

- +changing the form of the lens and focuses an image on the retina
- perception of the light signal
- refraction of beams
- changing the form of the lens and perception of the light signal

?

Function of the receptor apparatus:

- +perception and primary processing of the light signal
- changing the form of the lens and focuses an image on the retina

-refraction of beams
-changing the form of the lens and primary processing of the light signal

?

Name layer, which is NOT structure of cornea:

+vascular layer
-anterior and posterior epithelium
-proper substance
-anterior and posterior boundary membranes

?

Name layer, which is NOT structure of iris:

+supravascular layer
-external and internal boundary layers
-vascular layer
-anterior and posterior epithelium

?

Name layer, which is NOT structure of vascular tunic proper:

+anterior and posterior epithelium
-vascular layer
-vascular - capillary layer
-supravascular layer

?

What is NOT structure of vascular tunic:

+retina
-ciliary body
-vascular tunic proper
-iris

?

What is NOT structure of ciliary body:

+ciliary tunic
-ciliary processes
-ciliary epithelium
-ciliary muscles

?

Fibrous tunic consists of:

+sclera and cornea
-cornea and iris
-ciliary body, vascular tunic proper and iris
-sclera, anterior and posterior chamber

?

Name layers, which is formed by photoreceptor cells:

+external nuclear layer, external reticular layer, photoreceptor layer
-internal nuclear layer, internal reticular layer, photoreceptor layer
-internal nuclear layer, external nuclear layer, photoreceptor layer
-pigmental layer, ganglionic layer, photoreceptor layer

?

The external reticular layer is formed by:

+axons of photoreceptor cells and dendrites of bipolar and horizontal cells
-dendrites of photoreceptor cells and axons of bipolar and horizontal cells
-axons of photoreceptor cells and axons of bipolar and amacrine cells
-axons of photoreceptor cells and dendrites of ganglionic and horizontal cells

?

The internal reticular layer is formed by:

- +axons of bipolar cells and dendrites of ganglionic and amacrine cells
- axons of photoreceptor cells and dendrites of bipolar and horizontal cells
- axons of ganglionic cells and dendrites of bipolar and amacrine cells
- processes of neuroglia cells
- ?

The external nuclear layer is formed by:

- +bodies of photoreceptor cells
- bodies of pigment cells
- bodies of ganglionic cells and bodies of amacrine cells
- bodies of bipolar, horizontal and amacrine cells
- ?

The internal nuclear layer is formed by:

- +bodies of bipolar, horizontal, amacrine and neuroglia cells
- bodies of photoreceptor, horizontal and amacrine cells
- bodies of photoreceptor cells
- bodies of ganglionic amacrine and neuroglia cells
- ?

Photoreceptor layer is formed by:

- +dendrites of photoreceptor cells
- axons of photoreceptor cells
- dendrites of ganglionic cells
- processes of neuroglia cells
- ?

Name layers, which is formed by ganglionic cells:

- +internal reticular layer, ganglionic layer and layer of nerve fibers
- internal nuclear layer, internal reticular layer, photoreceptor layer
- internal nuclear layer, external nuclear layer and layer of nerve fibers
- pigment layer, ganglionic layer, photoreceptor layer
- ?

Name layers, which is formed by bipolar cells:

- +internal nuclear layer, external and internal reticular layer
- internal reticular layer, ganglionic layer and layer of nerve fibers
- pigment layer, ganglionic layer, photoreceptor layer
- internal reticular layer, ganglionic layer and layer of nerve fibers
- ?

Rods and cones are:

- +modified dendrites of the photoreceptor bipolar neurons
- modified axons of the photoreceptor bipolar neurons
- modified dendrites of the ganglionic neurons
- modified axons of the ganglionic neurons
- ?

Function of horizontal neurons:

- +blockade of the impulses transmission from photoreceptor neurons to the bipolar neurons
- blockade of the impulses transmission from bipolar neurons to the ganglionic neurons
- blockade of the impulses transmission from photoreceptor neurons to the ganglionic neurons
- blockade of the impulses transmission from ganglionic neurons to the bipolar neurons
- ?

Which of the following is composed of loose connective tissue?

- +Hypodermis
- Epidermis
- Reticular layer of dermis
- ?

Where is thick skin found?

- +Sole of the feet
- Over the knee
- Breast
- Lips
- All of the above

?

Which layer of the epidermis has cells which have keratohyaline granules?

- +Stratum granulosum
- Stratum basale
- Stratum spinosum
- Stratum lucidum
- Stratum corneum

?

Which cell is a macrophage found in the skin?

- +Langerhans cell
- Kupffer cells
- Histiocyte
- Dust cell
- Microglia

?

Which cell is it supposedly stimulating?

- +Fibroblast
- Langerhans cell
- Keratinocyte
- Melanocyte
- Merkel cell

?

What is the half moon shaped white area on a nail called?

- +Lunula
- Eponychium
- Matrix
- Nail bed
- Root

?

What is the growing part of the nail?

- +Matrix
- Lunula
- Eponychium
- Nail bed
- Root

?

What type of glands are the ceruminous glands?

- +Apocrine sweat gland
- Sebaceous glands
- Eccrine sweat gland
- Endocrine gland
- Oil gland

?

Which of the following is the most abundant sensory receptor of the skin?

- +Free nerve endings
- Ruffini's corpuscles

- Pacinian corpuscles
- Krause's end bulbs
- Meissner's corpuscle