Summative exam
S3 T1 … 2022-2023

Short answer :

CPS

1. Enumerate causes of iron deficiency

Ans/

- Chronic blood loss
- Increased demand
- Malabsorption of iron
- Inadequate iron intake
- Intravascular hemolysis and hemoglobinuria-hemosiderinuria
- Combinations

2. Enumerate 5 risk factors of hyperbilirubinemia.

Ans/

- maternal diabetes
- race (Chinese, Japanese, Korean, and Native American)
- prematurity
- drugs (vitamin K3 , novobiocin),
- altitude
- polycythemia
- male sex
- 21-trisomy
- oxytocin induction
- breast-feeding, weight loss

3. Enumerate 5 features of rickets

Ans/

Delayed closure of fontanelles Frontal bossing
Dental hypoplasia
Pectus carinatum
Swelling in wrist and ankle joints Wide sutures
Craniotabes
Rachitis rosary
Harrison’s sulcus Bowing of legs

4. Enumerate 4 difference between syncope and seizure

Ans/

Seizure : have aura, cyanosis, lateral tongue biting, post ictal(delirium, amnesia, headache) . And not rapidly recover

Syncope: don't have aura, cyanosis, lateral tongue biting, post ictal(delirium, amnesia, headache). And rapidly recover

5. Enumerate 4 appropriate situation for screening test

Ans/

1-The diseases is serious and represent a major public health problem (Ca breast, Ca cervix, Diabetes).
2-The natural history of the diseases is known.
3-There is a recognizable preclinical (asymptomatic) stage during which the disease can be diagnosed.
4-Early diagnosis and treatment lead to improved prognosis
5-Test is available that can detect undiagnosed conditions in the preclinical stage.
6-Effective treatment is available for the diagnosed conditions.
7-Facilities and resources are available to treat newly detected cases**.**

6. Enumerate 5 causes of central cyanosis?

Ans/

Decreased arterial oxygen saturation
Decreased atmospheric pressure—high altitude
Impaired pulmonary function
Alveolar hypoventilation
Inhomogeneity in pulmonary ventilation and perfusion (perfusion of hypo-ventilated alveoli) Impaired oxygen diffusion
Anatomic shunts
Certain types of congenital heart disease
Pulmonary arteriovenous fistulas
Multiple small intrapulmonary shunts
Hemoglobin with low affinity for oxygen
Hemoglobin abnormalities
Methemoglobinemia—hereditary, acquired
Sulfhemoglobinemia—acquired
Carboxyhemoglobinemia (not true cyanosis)

7. Enumerate 5 clinical sings and symptoms of severe dehydration?

Ans/ xshtakay naw malzama

General : Drowsy - limp, skin cold / sweaty
Radial pulse : Rapid, feeble
Respiration : Deep & rapid
Anterior font : Very sunken
Skin turgor : Poor
Eyes : Grossly sunken
Tears : Absent
Mucous memb : Very dry
Urine flow : Oliguria / anuria

8. Enumerate 5 lab features of iron deficiency anemia?

Ans/

• Hb,Htc,RBC: Low
• MCV,MCH,MCHC: Low
• RDW: High
• Retics: Normal/Low
• Plt: Normal/Low/High
• WBC: Normal/Low
• Serum Iron: ↓
• TIBC: ↑
• Serum Ferritin ↓
• Transferrin saturation (Fe/TIBC): ↓ (<15%)
• Serum Transferrin Receptor: ↑
• Free Erythrocyte Protoporphyrin ↑

9. Enumerate 5 lab feature of pathological hyperbilirinemia ..

Ans/

• family history of hemolytic disease
• pallor
• hepatomegaly, splenomegaly
• failure of phototherapy to lower bilirubin, vomiting, lethargy, poor feeding, excessive weight loss
• apnea, bradycardia, abnormal vital signs including hypothermia
• light-colored stools, dark urine positive for bilirubin, and signs of kernicterus.

MSK

1. What is origin of ulnar nerve and its motor supply ?

Ans/

It's a terminal branch of the medial cord of the brachial pluxes.it contains mainly fibers from the anterior rami of spinal nerves C8 and T1

Motor distribution:

FCU, FDU, Hypothenar muscles, palmaris brevis, dorsal and palmar interossei, ulnar lumbricals, adductor pollicus, deep head of flexor pollicus brevis

2. Enumerate ligament of vertebral column?

Ans/

1.anterior longitudinal ligament
2.posterior longitudinal ligament
3.intertransverse ligament
4.interspinous ligament
5.ligamentum flavum
6.surpraspinous ligament

3. Mention the distal row of carpals from lateral to medial

Ans/

Trapezium
Trapezoid
Capitate
Hammate

4. What is the intervertebral disc of the vertebral column, and its components?

Ans/

Intervertebral disc lies between adjacent vertebrae.each joint form a fibrocartilaginous joint to act as ligament for holding vertebrae together, and to function as shock absorber for the spine

Components:

1.Annulus fibrosus (an outer fibrous part)
2.Nucleus Pulposus (gelatinous central mass)

5. Enumerate contents of tarsal tunnel

Ans/

From anterior to posterior

• Tibialis posterior tendon
• Flexor digitorum longs tendon
• Posterior tibial artery
• Posterior tibial vein
• Tibial nerve
• Flexor hallucis longus

6. Structure deep to extensor retinacula?

Ans/

• From lateral to medial:

1Tendon of fibularis tertius
2.Tendon of extensor digitorum longus
3.dorsalis pedis artery
4.tendon of the extensor hallucis longus
5.tendon of the tibialis anterior

7. Define , describe cubital fossa and boundaries?

Ans/

The cubital fossa is the shallow triangular depression on the anterior surface of the elbow.

• The boundaries of the cubital fossa are

1.Superiorly, an imaginary line connecting the medial and lateral epicondyles
2.Medially, the pronator teres
3.Laterally, the brachioradialis
4.The floor of the cubital fossa is formed by the brachialis and supinator muscles
5.The roof of the cubital fossa is formed by the continuity of brachial and antebrachial (deep) fascia, reinforced by the bicipital aponeurosis,subcutaneous tissue, and skin.

8. Enumerate hip abductor muscles

Ans/

The primary hip abductor muscles include the gluteus medius, gluteus minimus, and tensor fasciae latae.

The secondary hip abductors include the piriformis, sartorius, and superior fibers of the gluteus maximus

9. Write about femoral triangle and boundaries

Ans/

•It is a triangular depressed area situated in the upper part of the medial aspect of the thigh just below the inguinal ligament.

•Boundaries:

1.Superiorly: Inguinal ligament
2.Laterally: Sartorius muscle
3.Medially: Adductor longus muscle
4.Floor: from lateral to medial (Iliopsoas, Pectineus, and Adductor longus)
5.Roof: skin and fasciae of the thigh

10. Bone healing and time square

Ans/

1-Hematoma(blood clotting) then inflammation
2-granulation tissue formation .
3-soft callus (fibrocartilage callus)
4-Hard callus (woven bone).
5-replacement of woven bone(non lamellar) by lamellar bone.
6- remodeling

11. How quadrangular space is produce ,and what dose it contain?

M&R

1. On what the receptor will classified?

Ans/

• Receptors are classified according to the specific physiological signaling molecule (agonist) that they recognize.
• Sub-classification is often made on the basis of their ability to be selectively activated by agonist molecules.
• Sub-classification is also often made on the basis of the affinity (a measure of tightness of binding) of a series of antagonists

2. Role of cyclic GMP phosphodiesterase activity in photo receptive cell of retina upon light excitation

Ans/

•In the dark, levels of cyclic GMP are sufficient to open a second messenger-operated ion channel which allows Ca2+ and Na+ to enter the cytoplasm.
•On exposure to light, activation of cyclic GMP phosphodiesterase causes a decrease in cyclic GMP leading to channel closure and membrane hyperpolarization, thus altering the signal output to the CNS.

3. What is difference between hydrophobic and hydrophilic molecules in terms of signaling mechanism?

Ans/

Hydrophilic signals interact with intracellular receptor often activating genes, while hydrophobic signals interact with cell surface receptor which can be linked to an ion channel,G protein or enzyme

4. What is mechanism of regulate cell volume?

Ans/

Cells extrude ions in response to cell swelling and influx ions in response to cell shrinking. Water follows.

5. Characteristics of the ion channels

Ans/

Fundamental ion channel characteristics include selectivity and gating. Channels differ in the number and types of ions they will pass (selectivity). Channels can be mechanically, ligand and/or voltage gated

6. By what general mechanisms can setting up and maintaining the gradient of [Ca2+]i ?

Ans/

1. Ca2+ influx across the plasma membrane:
ex: VOCC , VGCC, Receptor-operated ion channels
2. Ca2+ release from „rapidly-releasable" stores:
ex : GPCRs, CICR
3. Non-rapidly releasable stores (mitochondria)

7. Compared to muscarinic cholinoceptor antagonists, adrenoceptor agonists have a greater therapeutic benefit to asthmatic patients. What advantage does adrenoceptor agonist therapy confer over the use of muscarinic cholinoceptor antagonists?

Ans/

β2 Adrenoceptor agonists have much faster effect and they're more potent compared to M3 cholinoceptor antagonists, because the major receptors in the bronchi are β2

8. Why human cells can not produce response for molecular signals equally? While they have harbor genetic material.

Ans/

A receptor acts as a molecular "switch" that elicits a cell's response when it is "switched on"—i.e., has binding to it. Just as identical respond differently to types of switches can be used to turn on different the same chemical electrical messenger
appliances, a single type of receptor can be used to produce different responses in different cell types

9. Write about membrane composition and how they interact

Ans/

Biological membranes are composed of a lipid bilayer with associated membrane proteins which may be deeply embedded in the bilayer (integral membrane protein interact extensively with the hydrophobic regions of the lipid bilayer.) or associated with the surface (peripheral membrane protein bound to the surface of membranes by electrostatic and hydrogen bond interactions.)

10. Effects of phosphatidylinositol 4,5 bisphosphate on G protein?

Ans/

11. Describe mechanism of drug elimination.

Ans/

Drug excretion is the removal of drugs from the body, either as a metabolite or unchanged drug. There are many different routes of excretion, including urine, bile, sweat, saliva, tears, milk, and stool. By far, the most important excretory organs are the kidney and liver

12. Drugs that are used to treat hypertention

Ans/

Angiotensin-converting enzyme (ACE) inhibitors reduce blood pressure by relaxing your blood vessels.
Common examples are enalapril, lisinopril, perindopril and ramipril.
The most common side effect is a persistent dry cough. ...
Common examples are candesartan, irbesartan, losartan, valsartan and olmesartan.

13. What are the classification of drugs used in hypertension?

Ans/

Several different classes of medications are available to reduce blood pressure. The six main drug classes, included in this review, are thiazide diuretics, beta-blockers, angiotensin converting enzyme (ACE) inhibitors, angiotensin receptor blockers, calcium channel blockers, and alpha blockers.

14. Neurotransmitters synthesis, release- Site of drug action, basic process that take place at typical synapses.

Ans/

Acetylcholine is synthesized by the enzyme choline acetyltransferase from choline (an essential dietary constituent) and the metabolic intermediate acetyl CoA in the cytoplasm of cholinergic terminals.
Cholinergic terminals possess numerous vesicles containing high concentrations (>100 mM) of ACh that can be released by Ca2+-mediated exocytosis.
Site drug actions
Basic Steps in Neurotransmission - Sites of Drug Action

The basic processes that take place at a typical synapse are summarized below:

1. uptake of precursors
2.synthesis of transmitter
3. vesicular storage of transmitter
4. degradation of transmitter
5. depolarisation by propagated action potential
6. influx of Ca^{2*} in response to depolarisation
7. exocytotic release of transmitter
8.diffusion to post-synaptic membrane
9. interaction with post-synaptic receptors
10. inactivation of transmitter
11. re-uptake of transmitter or degradation product(s)
12. interaction with pre-synaptic

CVS

1. Write a short note about coronary circulation

Ans/

coronary circulation, part of the systemic circulatory system that supplies blood to and provides drainage from the tissues of the heart,,In order to attain a mean blood flow appropriate to myocardial activity, therefore, the coronary circulation must have a high blood flow in diastole to compensate for reduced blood flow in systole.

2. Write short note on surface anatomy

Ans/

The apex is formed by the tip of the left ventricle
The base or posterior surface of the heart is formed by the atria, mainly the left.
The anterior surface of the heart is shaped by the right atrium and ventricle.
The inferior surface of the heart is formed by both ventricles, primarily the left.

3. Define myocardial infraction & unstable angina

Ans/

Unstable angina is defined as any of the following clinical presentations, with or without ECG evidence of ischemia and with a normal troponin.
A heart attack (**myocardial infarction**) is a deadly medical emergency where your heart muscle begins to die because it isn't getting enough blood flow. A blockage in the arteries that supply blood to your heart usually causes this.

4. Write short note about cardiac action potential

Ans/

Cardiac action potential is a sequence of electrical activity that result in excitation of the cell that spread from cell to cell by propagation of the signal

5. What is right border of heart contain?

Ans/

The right border is established by the right atrium and the superior and inferior venae cavae

6. There are two ways in which fluid flows through tubes explain them

Ans/

There are two ways in which fluid flows through tubes - Laminar and Turbulent

• Mostly, flow in the circulation is laminar.

Turbulent flow generates sound. In laminar flow adjacent layers of fluid are moving along the tube at different velocities, and so must slide over one another. The extent to which they can do this is determined by the viscosity. In more viscous fluids the layers are harder to separate

7. Effect of parasympathetic and sympathetic on heart rate

Ans/

An increase in sympathetic flow to the heart will increase heart rate (beyond 100bpm) and the force of heart contraction ,

An increase in parasympathetic flow to the heart will decrease heart rate (about 60bpm)

8. What is the affect of venous return to heart (Cardiac output)

Ans/

Increase venous return increase cardiac output

Decrease venous return decrease cardiac output

9. Define endocardial cushion and looping of the heart?

Ans/

endocardial cushions refers to a subset of cells that form either in the av canal or in the truncus arteriosus and has an important role in dividing heart into right and left sides and in producing the outflow tract

Septation:is the process by which the heart is divided into right and left sides by producing a septum

10. Describe AV canal and septation of the heart ?

Ans/

septation: the primitive heart tube becomes divided into chambers and the outflow tract is subdivided into pulmonary trunk and aorta.

AV canal: the junction between the atrium and ventricle becomes constricted creating a narrow channel called the atrioventricular canal, This narrowing provides a framework by which the inter-atrial and inter-ventricular septa are formed.

11. What will happen to the resistance of blood vessels to flow if blood becomes more viscous?

Ans/

It will increase

12. Define vasomotor tone , reactive hyperaemia , vasodilator metabolites.

Ans/

Vasomotor tone continues contraction of the muscle, is the end result of a complex set of interactions that control relaxation and contraction of blood vessels.,

Reactive hyperemia is local arterioles dilate maximally when perfusion is restored blood flow is very high, it is due to metabolites accumulating during the period when metabolism continues but no blood is flowing to remove them

Vasodilator metabolites are substances produced in the tissues causes dilation of blood vessels

13. Primitive heart tube & looping

Ans/

MOD

1.Causes of acute inflammation

Ans/

Microbial infections , hypersensitivity , tissue necrosis , foreign bodies

2. Stage of inflammatory response

Ans/

(1) recognition of the injurious agent,
(2) recruitment of leukocytes,
(3) removal of the agent,
(4) regulation (control) of the response
(5) resolution (repair).

3. Define niche cells and its function

Ans/

Niche cells are non-stem cells that “provide a sheltering environment that sequesters stem cells from differentiation stimuli, apoptotic stimuli, and other stimuli that would challenge stem cell reserves.”
And they contribute to balance between adult stem cell quiescence and replication.

4. What is the sequential consequences that lead to homeostasis ?

Ans/

1)Arteriolar vasoconstriction
2) Primary hemostasis: the formation of the platelet plug
3) Secondary hemostasis: deposition of fibrin.
4) Clot stabilization and resorption

5. What are cytomorphology of cancer?

Ans/

1.Loss of basal polarity
2. Pleomorphism
3. N/C ratio high
4. Anisonucleosis
5. Nuclear hyperchromatism
6. Nucleoli prominent (nuclear change)
7. Abnormal mitotic figures
8. Tumour giant cells
9. Increased mucin
10. DNA aneuploidy , chromosomal abnormality

6. What is the difference between metaplasia and dysplasia?

Ans/

ature	Metaplasia	Dysplasia
Definition	Change of one type of epithelial or mesenchymal cell to another type of adult epithelial or mesenchymal cell	Disordered cellular development, may be accompanied with hyperplasia or metaplasia
Types	Epithelial (squamous, columnar) and mesenchymal (osseous, cartilaginous)	Epithelial only
Tissues affected	Most commonly affects bronchial mucosa, uterine endocervix; others mesenchymal tissues (cartilage, arteries)	Uterine cervix, bronchial mucosa
Cellular changes	Mature cellular development	Disordered cellular development (pleomorphism, nuclear hyperchromasia, mitosis, loss of polarity)
Natural history	Reversible on withdrawal of stimulus	May regress on removal of inciting stimulus, or may progress to higher grades of dysplasia or carcinoma *in situ*

7. Clarify relationship between age and cancer.

Ans/

the frequency of cancer increases with age,,The rising incidence with age may be explained by the accumulation of somatic mutations that drive the emergence of malignant neoplasms,,The decline in immune competence that accompanies aging also may be a factor.

8. Signs of inflammation

Ans/

1- redness(rubor)
2- swelling (tumor)
3- heat (calor)
4- pain(dolor)
5 - loss of function

9. Define chronic inflammation and how it occur ?

Ans/

Chronic inflammation is a response of prolonged duration (weeks or months)
1. May ‘take over’ from acute inflammation
2. May arise de novo
3. May develop alongside acute inflammation

10. Define persistent infection and how it occurs

Ans/
Persistent Infections by microorganisms that are difficult to eradicate, such as mycobacteria and certain viruses, fungi, and parasites.
In other cases, unresolved acute inflammation evolves into chronic inflammation

11. Local complications of acute inflammation:

Ans/
1- Swelling: Blockage of tubes, e.g. bile duct, intestine
2- Exudate:Compression e.g. cardiac tamponade Serositis.
3- Loss of fluid e.g. burns
4- Pain & loss of function especially if prolonged.

12. Risk factors for atherosclerosis

Ans/
- Modifiable:

Hyperlipidemia ,Hypertension ,Cigarette smoking ,Diabetes ,
C-reactive protein
• Non modifiable: Increasing age , Male gender , Family history ,
Genetic abnormalities

13. Outline hyperplasia with examples

Ans/
Is the increase in the number of parenchymal cells resulting in enlargement of the organ or tissue
Ex : Hyperplasia of pregnant uterus (hormonal hyperplasia) , Regeneration of the liver(compensatory hyperplasia), Endometrial (pathologic hyperplasia)

14. Systemic effect of inflammation

Ans/
1- Fever: Endogenous pyrogens' produced: IL1 and TNF.
2- Leukocytosis :IL1 and TNF produce an accelerated release from marrow.
3- Acute phase response Decreased appetite, altered sleep patterns and changes in plasma concentrations of:
Acute phase proteins: C-reactive protein (CRP)

MCQ
CPS

1.All of the following caused localized edema except.
A. Cellulitis
B. Deep venous thrombosis
C. Heart failure
D. Lymphatic obstruction

2. All of the following is true about cyanosis except.
A. Cyanosis refers to a bluish color of skin and mucosa membrane resulting from an increased quantity of reduced hemoglobin.
B. Most common cause of central cyanosis is methomoglobin.
C. Most common cause of peripheral cyanosis is the normal vasoconstriction from exposure to cold air or water

3. All of these are true about vitamin D except
A. Its source are Liver, beef, veal, eggs yolk , dairy products , some saltwater fish(salmon, tuna and sardine). – Fortified food
B. Synthesis in skin.
C. It is unstable in cooking and storage.
D. The normal dietary form of vitamin D is cholecalciferol (also known as calciol).

4. All of these are true about vitamin D except
A-active form of VitD3 ： 1, 25- (OH)-VitD3
B-The main function of vitamin D is in the control of calcium homeostasis
C-It is water soluble vitamin
D-About 50% of dietary vitamin D3 is absorbed

5. Most cause prolong jaundice
1. Breast milk jaundice
2. Hemolysis
C. Bile atresia

6. Most commonly type syncope :
A. Cardiac
B. Vasovagal

7. Good test for screening: Random blood sugar test

8. Which one is not true about hypertrophic pyloric stenosis
A. start at 2-6 week
B. occur more in boy
C. bilious projectile vomit after feeding. -> chunka xoy non bilious'a
D. infants hungry and alert ,will re-feed

9. According hyperbilirubinema all true except:
Ans/ 60% infant , 80% pre infant

10. The Ability of test to identify correctly all screened individual who acutely have disease:
A. Sensitivity
B.specificity
C.predictive value +
D.predictive value -

11. Main cause of gastroenteritis :
A. Food poisoning
B. Drug
C. Viral infection

12. All right about iron deficiency except:
A. Ascorbate increases absorption iron
B. Phytates ,tannate ,antacid decrease absorption by making complex
C. most common in men than women
D. Little intake little loss

13. All right about Vit D except:
Ans/ Unstable in cooking and storage

14. Which of one of the following is storage of iron:
A. transferrin
B. ferritin
C. cytochrome
D. hemoglobin

15. All of the following about iron metabolism is true except:
A. iron metabolism in the body is closed system little intake and the loss
B. iron deficiency is common in men than women
C. iron body store is greater in men than women

MSK

1. The cubital fossa does Not contain
A. Terminal part of brachial artery
B. Deep accompanying veins of the arteries
C. Median nerve
D. Biceps brachii tendons
E. Ulnar nerve

2. Which of the following statements correctly applies to the iliopsoas muscle?
A. It is a flat quadrangular muscle.
B. It is the chief flexor of the thigh.
C. It is enclosed between two layers of fascia lata.
D. It inserts into the iliotibial tract.
E. It is located in the posterior compartment of the thigh

3. All of the following statements concerning the femoral triangle are correct EXCEPT:
A. Its superior border is the inguinal ligament.
B. Its lateral border is the sartorius.
C. It is bisected by the femoral artery and vein.
D. The saphenous nerve passes through the femoral triangle.
E. Its medial border is the adductor magnus.

4. Which of the following arteries provides the main blood supply for the hip joint?
A. obturator
B. medial circumflex
C. lateral circumflex
D. common iliac
E. internal iliac

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7. All of the following statements concerning the adductor magnus are correct EXCEPT
A. It is the largest muscle in the adductor group.
B. It is located in the posterior compartment of the thigh.
C. It has adductor and hamstring parts
D. It is a composite, triangular muscle with two parts that differ in nerve supply.
E. Its main action is to adduct the thigh.

8. All of the following muscles are lateral rotators of the thigh except?
A. Quadratus femoris
B. Obturator internus
C. Obturator externus
D. Inferior gemellus
E. Gluteus medius

9. All of these are true concerning the femoral triangle EXPECT !?
A. Superior border is formed by inguinal ligament
B. Lateral border is formed by sartorius muscles
C. Femoral triangle is bisected by femoral artery and vein
D. the saphenous nerve passes through femoral triangle

10. All of the following statements concerning the gluteus medius and minimus are correct. except?
A. They all have the same nerve supply
B. They have the same actions
C. They are supplied by the same blood vessels
D. They abduct the thigh and rotate it laterally
E. they are largely responsible for preventing sagging of the unsupported side of the pelvis during walking

11. The floor of the popliteal fossa includes which of the following statements?
A. Oblique popliteal ligament
B. Patella
C. Lateral meniscus
D. Anterior cruciate ligament
E. Posterior cruciate ligament

12. Which of the following is NOT a distinctive characteristic of a typical cervical vertebra?
A. The body is small and wider from side to side than anteroposteriorly
B.The vertebral foramen is large and triangular
C. The transverse processes contain transverse foramina
D. The articular processes contain superior facets directed inferantererty
E. The spinous processes are short and bifid.

13. Which of the following muscles contract to assist the posterior cruciate ligament in preventing anterior displacement of the femur on tibia?
A. plantaris
B. flexor hallucis Longus
C. flexor digitorum Longus
D. popletus
E. soleus

14. All of the following muscles are located in the deep muscle group of the posterior compartment except?
A. flexor digitorum longus
B. popliteus
C. plantaris
D. flexor hallucis longus
E. tibialis posterior

15. Which of the following statements correctly applies to the lateral meniscus
A. It is larger and less movable than the medial meniscus
B. It is in contact with the fibular collateral ligament.
C. It is attached to the posterior cruciate ligament by the posterior meniscofemoral ligament
D. It adheres to the deep surface of the tibial collateral ligament
E. It acts like a shock absorber.

16. Muscles that evert the foot include which of the following muscles?
A. gastrocnemius
B. soleus
C. tibialis posterior
D. fibularis brevis
E. flexor digitorum longus

17. The central compartment of the foot contains all of the following muscles Except?
A. flexor digitorum brevis
B. flexor digitorum longus
C. quadratus plantae
D. abductor hallucis
E. Lumbricals

18. Lordosis is characterized by which of the following?
A. an abnormal increase in thoracic curvature
B. an anterior rotation of the pelvis
C. an abnormal lateral curvature D. rotation of the vertebrae
E. lateral curvature of the spine

19. Which statement regarding cervical vertebrae is incorrect?
A. There are seven cervical vertebrae
B. They typically have a bifid spine
C. They all have a transverse foramen
D. The vertebral body is larger than the vertebral foramen.
E. There are a total of three atypical cervical vertebrae.

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B. popliteus
C. plantaris
D. flexor hallucis longus
E. tibialis posterior

23. Which of the following statements are true about intervertebral disc answer:
Answer E:there is no intervertebral disc between C1 and C2

24. About carpus which of the following true :
Answer: D: Trapezium articulate with distal radio ulnar joint

M&R

1.Sodium ions are usually more concentrated _ of the cell and potassium ions are usually more concentrated _ of the cell
A. Outside/ inside
B. Inside /outside
C. Inside / inside
D. Outside /outside

2. Following statements about indirect-acting adrenergic agonists are true except:
a) Interaction with a specific adrenoceptor
b) Release of the endogenous catecholamines
c) Do not bind to specific receptor
d) Inhibition of the reuptake of catecholamines already released

3. Metoprolol is different from propranolol in the following context;
A. Metoprolol is less likely to cause bronchoconstriction
B. Metoprolol has selectivity for beta-2 adrenoceptor
C. Metoprolol is used to treat hypertension
D. Metoprolol inhibits renin release from the kidney

4. True statement concerning competitive inhibition.
A. Competitive in addition is based on reversible drug/antagonist binding at receptor sites.
B. With competitive inhibition, the dose-effects curve shifted to the left
C. With competitive inhibition, maximal drug effect cannot be obtained, even at high agonist concentrations
D. All the above

5. The polar head of a phospholipid is made of?
A. fatty acid
B. sugar
C. glycerol
D. vesicle

6. The drug used in the treatment of myasthenia gravis is:
A. Edrophonium
B. Pyridostigmine
C. Neostigmine
D. Ambenonium

7. Which of the following cholinomimetic drug is used for the treatment of craving reduction in nicotine addiction?
A. Bupropion
B. Cevimeline
C. Varenicline
D. Galantamine

8. All of the followings are reversible indirectly acting cholinomimetics, except:
A. Physostigmine
B. Echothiophate
C. Edrophonium
D. Neostigmine

9. Indirect-acting cholinomimetic agent acts via.
A. Stimulation of action of acetylcholinesterase
B. Binds to and activate muscarinic and nicotinic receptors
C. Inhibition of hydrolysis of endogenous acetylcholine
D. Release of acetylcholine from the storage site

10. Which of the following routes of administration do not by pass the first pass metabolism?
A. Intravenous
B. nasogastric tube
C. sublingual
D. topical

11. What mechanism reduces the proportion of active drug available in circulation :
A. bioavailability
B. lock and key mechanism
C. first pass metabolism

12. Concerning drug receptor interactions, the constant Kd refers to:
A- maximal physiological effect
B- maximal binding
C-the concentration required to occupy 50% of receptors
D-all of the above

13. EC50 reflexes drug's:
A. maximum effect
B. potency
C. letheality
D. safe
E. ease of elimination

14. Increase number of specific protein on bilayer :
A. Increase permeability membrane to polar molecules and ion
B. decrease permeability membrane to polar molecules and ion
C. Increase permeability membrane to non polar molecules and ion
D. decrease permeability membrane to non polar molecules

15. Which on is not true for osmosis:
A. Only solute move
B. Only solvent move
C. Both solvent and solute move
D. non of solvent and solute move

16. Ion channels are characterized by:
A. Gating
B. selectivity
C. high rate ion flow always down electrochemical gradient for ion
D. All

17. According membrane depolarization:
A. Na+ channel open then K+ channel open
B. K+channel open then Na+ channel open
C. Both open on same time
D. Na+ open and k+ still close

18. Which one is not rapidly releasable Ca+ store:
A. GPCRs
B.CICR
C.Mitochondria
D. Non of them

19. Most composition of membrane is:
A- Carbohydrate
B- Protein
C- Lipid

20. Hereditary spherocytosis :
A. Ankirin level decrease by 40-50%
B. Spectrin lever deplete by 40-50%
C. Flattened shape cells and more resistance to lysis
D. Cells are round like a sphere and less resistance to lysis

21. In All of the following action potential occurs except:
A-muscle
B-neuron
C-endocrine
D-skin

22. Which motion in the plasma membrane at least occurs:
A. intra chain motion
B. flip flop movement
C. axial rotation
D. lateral rotation

23. In myasthenia gravis which one is true:
A. antibodies directed against nAChR on post synaptic membrane
B. antibodies directed against CA channel
C. antibody directed against acetylcholine molecule
D. all of them

24. If a drug has a 'small therapeutic index' what does this mean?
A. A bigger dose is required to get the drug affect.
B. The drug is not effective.
C. There is little difference between the dose for the right affect and the dose to be toxic.
D. There is a big different between the dose for the right affect and the dose to be toxic.

CVS

1.Tricuspid atresia:
A. Cyanotic congenital heart disease
B. Acyonotic congenital heart disease
C. Defect in the aortic valve
D. Defect in mitral valve

2. According to the cardiogenic field:
A. a pair of tubes endocardial tubes) develops within the cardiogenic field in the 3rd week of development.
B. at first lies at the cranial end of the embryo before folding occurs.
C. from which the heart, blood vessels and blood cells will develop.
D. all

3. Veins:
A-low resistance,high capacitance
B-they contain most of the blood
C- the pressure determine the volume of the blood they contain
D-all

4. About Tetralogy of fallout which one is not true :
A. ASD
B. RVH
C. Pulmonary stenosis
D. Aortic overright

5. Choose odd one:
A- First heart sound - AV valves close
B- Second heart sound semilunar valves close
C- Third heart sound may be heard in early diastole
D- Fourth heart sound always associated with arterial contraction

6. Vein construction is similar to artery, except:
A.wall is thinner
B. Lumen is wider & irregular
C. Both
D.None

7. Cardiac pacemaker cells :
A-there is no plateau phase in pacemaker cell
B-it doesn't have fast NA channel
C-it has no resting membrane potential
D-all of them

8. The cardiovascular system as a whole must :
A.Deliver between 5 and 25 l min-l of blood to the body
B.Maintain a blood flow of 750 ml.min- l to the brain at all times
C.Maintain blood flow to the heart muscle and kidneys at all times
D. All

9. Which test use in diagnose cardiac syncope
A. ECG
B. Echocardiogram
C. EEG
D. None

10. End systolic volume:
A-end systolic volume increases if venous pressure increases
B-end systolic volume is determined by how ventricles contracts during diastole
C-end diastolic volume is not affected by heart failure
D-all of the them

11. Systole and diastole
A. systole is contraction of myocardium
B. Diastol is relaxation of myocardium
C. The cardiac cycle is the sequence of volume changes and valve operation that occur with each heart beat
D. tip of heart relax last and contract first to prevent backflow

12. Regarding total peripheral resistance:
A-total peripheral resistance is inversely related to the total metabolic need for blood flow
B-false in TPR increase venous pressure if cardiac output is increased
C-falls TPR reduce atrial pressure if cardiac output is unchanged
D-more metabolic activity leads to lower TPR

13. Veins:
A. Have low resistance
B. Have high capacitance
C. The pressure on vein affected by volume
D. All

14. MCQ
A-sympathetic vasomotor tone is the lowest in skeletal muscle at rest
B-symapthatic outflow is coming from cranio-cortex
C- the circulation to the the brain is not affected by sympathetic activity

15. In ECG :
A-depolarisation spreading towards a positive recording electrode yields an upward deflection
B-depolarisation spreading away from a positive recording electrode yields a downward Deflection
C-repolarisation spreading towards a positive recording electrode yields upwnward deflection
D-depolarization spreading away from a positive recording electrode yields an upward deflection.

16. Blood vessel reach every part of the body except:
A- Brain and spinal cord
B- Heart it self
C- Upper&amp , lower limb
D- epithelia

17.MCQ
A- Blood flow is turbulent in most vessels
B- Blood flow become turbulent when velocity exceeds a critical value
C- Resistance for turbulent blood flow lower than laminar
D- Turbulent occurs only in small blood vessels

18. MCQ
A- Aortic and pulmonary valve closes at the onset of the ventricular systole
B- During isovolumetric contraction the pressure in ventricle rises but the intraventricular volume does not change
C- The aortic valve opens about 400 ms after the mitral valve closes
D- The mitral valve opens about 800 ms after the aortic valve closes

19. In addition to the continuous and fenestrated , there is another type of capillary called sinusoids which present in .....
A- Kidney , amp , liver
B- Bone , marrow , spinal cord
C- Liver , spleen , and bone marrow
D- Liver , spleen , and kidney

20. Cutaneous circulation
A-most blood flow through skin is not nutritive
B-much of blood flow of the skin is through artero- venous anastomosis rather than capillaries
C-the main function of the skin is to maintain a constant body temperature
D-all of them

21. Regarding pressure in tube:
A. There is a large pressure change over the length of the arteries
B.The velocity of blood flow is highest in the capillaries
C. The low pressure gradient between the large veins and the right heart- is associated with a high velocity of blood flow in the veins
D. Pressure changes most over the arterioles

22. Which statement about Starling law not true :
A. More in / more out
B. More in / less out

MOD

1.Sequence of cancer development?
A. Normal cell - hyperplasia - dysplasia - cancer
B. Normal cell - dysplasia - hyperplasia- cancer
C. Nomal cell - cancer

2. Cancer can spread in these ways except
A-air droplet
B-haematogenous spread
C-lymphatic spread
D-cerebrospinal fluid

3. Complicated plaque:
A. Neovascularisation
B. Thrombosis
C. Calcification
D. Aneurysm

4. All of the following mediators by chronic inflammation except:
A-mast cell
B-macrophage
C-prokaryotes
D-neutrophils
E-lymphocytes

5. All of the following are true about cell injury except:
A- ATP depletion
B- Irreversible mitochondrial damage
C- Intracellular sodium and loss of sodium homeostasis
D- Defects in membrane permeability
E- Oxygen and oxygen-derived free radicals

6. Which of the following are not complicated plaque:
A-thrombosis
B- haemorrhage into plaque
C-calcification
D-aneurysm formation
E-..... wallamaka , shteky hala nusrabu

7. All of these are examples of stable cell except
A-kidney
B-liver
C-thyroid
D-heart
E-adrenal

8. Which of the following are carcinogenic agents
A- chemicals
B- radiant energy
C- microbial products
D- all of them

9. About chronic inflammation choose true statement:
A- Initial, duration is minutes or hours
B- Mild fibrosis
C- prominent sign and symptoms
D- Cellular infiltrates are Monocytes/macrophages and lymphocytes

10. Which one of the following is modifiable risk factor of atherosclerosis:
A-male gender
B-family history
C-Diabetes
D- genetic abnormalities

11. Choose the false one:
A-LDL carries 75% of blood cholesterol
B-All cells possess LDL receptors, but liver possesses by far
C-the number of LDL receptors on each hepatocyte is regulated by the intracellular cholesterol level
D--the most and 75% of plasma LDL is removed by the hepatocytes, which therefore control blood cholesterol level

12. Which of the following is not pathologic cause of atrophy:
A-starvation
B-atrophy of gonads after menopause
C-endocrine atrophy
D- ischemic atrophy

13. Not hallmark of cancer
A. Normal cell membranes
13. All of the following are cause of cell injury except:
A-genetic abnormalities
B-nutritional imbalances
C-physical activity
D-immunological

14. Which of following about P53 is not true:
A- P53 induces expression of DNA damage repair genes
B- p53 assists in DNA repair by causing G1 phase arrest
C- undamaged DNA is not repaired by p53

15. All of the following are physiologic process of apoptosis except:
A-menstruation
B-menopause
C-intestinal homestasis
D-organ atrophy

16. Which of the following are not genetic lesions of cancer:
A- multiploidy
B-point mutation
C-gene re-arrangements
D-deletion
E-gene amplification

17. Which one about the hallmarks of cancer is not true:
A-self-sufficiency in growth signals
B-insensitivity to growth-inhibitory signals
C-limited of replicative potential
D-evasion of immune surveillance

18. AFP is a tissue marker of cancer in which organ?
A-liver
B-stomach
C-adrenal
D- pancreas

19. All about benign tumour choose the true one:
A-breach the basement membrane
B- well - differntiation
C-infarction like central infarction
D-secondary metasis

20. Which one of the following is not special categorized of tumour:
A- blastoma
B- hamartoma
C- hemangioma
D- choristoma