

## **Semester 3-Summative exam- Q&A- 2021/2022**

### **“Short answer”**

Q. Secondary Union steps

**Ans/** 1- initial haemorrhage  
2- inflammatory phase  
3- epithelial change  
4- granulation tissue  
5- wound contraction  
6- presence of infection

Q. Define Stroke volume, End diastolic volume, End systolic volume

**Ans/** Stroke volume: the volume of blood pumped out of the left ventricle of the heart during each systolic cardiac contraction.

End systolic volume: is the volume of blood in a ventricle at the end of contraction, or systole, and the beginning of filling, or diastole. ESV is the lowest volume of blood in the ventricle at any point in the cardiac cycle

End diastolic volume: is the volume of blood in the right and/or left ventricle at end load or filling in or the amount of blood in the ventricles just before systole

Q. Describe shoulder joint and talk about its blood supply muscles and injury of it

**Ans/** It is formed between head of humerus and glenoid cavity of scapula, it's synovial ball& socket joint, Blood supply to the shoulder joint comes from the anterior and posterior circumflex humeral, circumflex scapular and suprascapular arteries

Injuries:

- 1-Rotator cuff tendinitis
- 2-Supraspinatus Tendon Rupture
- 3-Anterior-Inferior Dislocation
- 4-Posterior Dislocations
- 5- scapula fracture

Q. Risk factors of venous thrombosis

**Ans/** 1-heart failure  
2-post-operation  
3-immobilisation/ bed rest  
4-Trauma  
5-surgery  
6-burns  
7-pregnancy  
8-pro coagulant release  
9- disseminated cancer

Q. Name the systemic consequence of acute inflammation? (MOD)

**Ans/** 1-Acute Phase Response

Decreased appetite, raised heart rate, altered sleep patterns and changes in plasma concentration of Acute Phase Proteins, such as C-Reactive Protein (CRP), Fibrinogen and alpha1 -antitrypsin. The spread of micro-organisms and toxins can lead to Shock, a clinical syndrome of circulatory failure

2-Fever

Endogenous pyrogens (substances that produce fever) IL-1, (TNF alpha) and prostaglandin are produced.

3-Leukocytosis

IL-1 and (TNF alpha) produce an accelerated release from marrow. Macrophages,

T-lymphocytes produce colony-stimulating factor

Q. In acute inflammation, what is the effect of histamine?

Ans/ 1-vascular dilation

2-increased vascular permeability

Q. Describe how membrane transporter mechanisms and ion channels contribute to the maintenance of ion and solute gradients across membranes, and how these mechanisms regulate pH and cell volume?

Ans/ Acidification can be opposed by expelling  $H^+$  ions or the inward movement of bicarbonate ions.

- **Alkalinisation** is opposed by expelling bicarbonate via the anion exchanger. Cells extrude ions in response to cell swelling and influx ions in response to cell shrinking. Water follows.

- Different cell types use particular combinations of transporters to achieve the regulation they need

Q. Write short note about conducting system

Ans/ The heart conduction system is the network of nodes, cells and signals that controls your heartbeat. The main parts of the system are the **SA node**, **AV node**, bundle of **HIS**, bundle branches, and Purkinje fibers.

Q. Prostate classification

Ans/ I. Acute bacterial prostatitis.

II. Chronic bacterial prostatitis.

III. Chronic pelvic pain syndrome (CPPS): chronic abacterial prostatitis. IIIA Inflammatory CPPS: WBC in expressed prostatic secretions (EPS), post- prostatic massage urine (VB3), or semen.

IIIB. Non- inflammatory CPPS: no WBC in EPS, VB3, or semen.

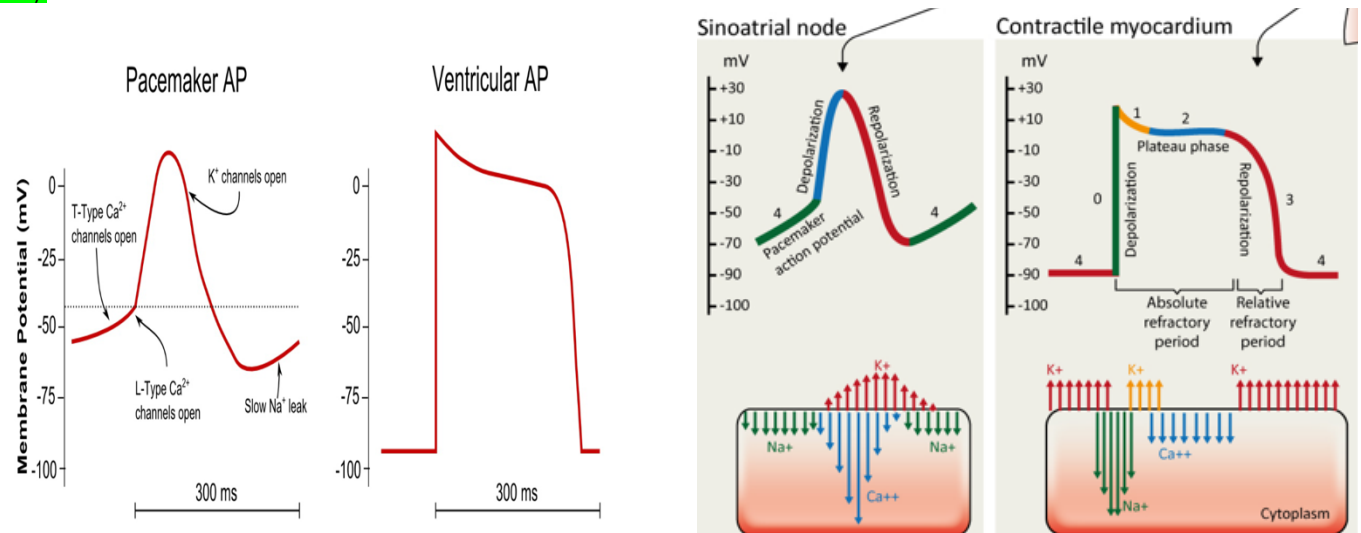
IV. IA symptomatic inflammatory prostatitis (histological prostatitis).

Q. Gluteus maximus nerve supply?

Ans/ The inferior gluteal nerve (dorsal branches of the ventral rami of L4, L5, S1, and S2 spinal nerves)

Q. Draw a Membrane potential change in pacemaker cells and ventricles

Ans/



Q. Femoral triangle

**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:**

\*Superiorly: Inguinal ligament

\*Laterally: Sartorius muscle

\*Medially: Adductor longus muscle

\*Floor: from lateral to medial (Iliopsoas, Pectineus, and Adductor longus)

\*Roof: skin and fasciae of the thigh

• **Contents from lateral to medial are:**

\*Femoral nerve (terminal) branches.

\*Femoral sheath =( Femoral artery and several of its branches. Femoral vein and its proximal tributaries (e.g., the great saphenous and deep femoral veins).

\*Deep inguinal lymph nodes and associated lymphatic vessels.

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

**Ans/** Increased viscosity increases the resistance to blood flow

Q. Describe anatomical position

**Ans/** • Body upright in the vertical axis

• Legs and feet parallel

• Arms hanging by sides

• Palms and face are directed forward

Q. What are contain middle mediastinum?

**Ans/** The **middle mediastinum** consists of the pericardial sac containing the heart and its blood vessels (coronary vessels) and the roots of the aorta, superior and inferior vena cava and the pulmonary vessels

Q. What are cytomorphology of cancer?

**Ans/** Cytomorphology of Neoplastic Cells (Differentiation and Anaplasia)

**Differentiation** is defined as the extent of morphological and functional resemblance of parenchymal tumour cells to corresponding normal cells

**Anaplasia** is lack of differentiation and is a characteristic feature of most malignant tumors .poorly differentiated malignant tumours have high degree of anaplasia.

Q. What factor involve in insulin resistance in pathologic effect?

**Ans/** TNF & IL1

Q. Define cubital fossa

**Ans/** A triangular depression in front of the elbow.

**Contents :**

1- terminal part of brachial artery

2- tendon of biceps muscle

3- median nerve

4- radial nerve

5- superficially: supratrochlear lymph node & median cubital vein

**Boundaries:**

1- Laterally: brachioradialis muscle

2- Medially: pronator teres muscle

3- The base is formed by an imaginary line drawn between the two epicondyles of humerus.

4- Floor: supinator and brachialis

5- Roof: skin and fascia, reinforced by bicipital aponeurosis.

Q. Mention the 4 outcomes of acute inflammation. (MOD)

**Ans/** 1- Complete resolution.  
2- Continued acute inflammation with chronic inflammation; chronic suppuration.  
3- Chronic inflammation and fibrous repair, probably with tissue regeneration.  
4- Death.

Q. Enumerate the symptoms of bladder outlet obstruction

**Ans/** 1. Hesitancy  
2. Loss of force and weak stream  
3. Terminal dribbling  
4. Urgency  
5. Acute urinary retention  
6. Chronic urinary retention  
7. Intermittent urinary stream  
8. Sense of incomplete emptying

Q. Definition of bioavailability.

**Ans/** bioavailability: is the fraction of an administered drug that reaches the systemic circulation.

Q. Neutrophil adhesion by endothelium by what?

**Ans/** by cell adhesion molecule: selectins and integrins

Q. Define these: Unstable angina, Variant angina, Silent ischemia

**Ans/** **Unstable angina** is defined as any of the following clinical presentations, with or without ECG evidence of ischemia and with a normal troponin.

**Variant angina:** Typical anginal discomfort, usually at rest, which develops because of coronary artery spasm rather than an increase of myocardial oxygen demand;

**Silent ischemia:** Asymptomatic episodes of myocardial ischemia; can be detected by electrocardiogram and other laboratory techniques.

Q. What are ECG criteria for LBBB?

**Ans/** QRS duration greater than 120 milliseconds  
Absence of Q wave in leads I, V5 and V6  
Monomorphic R wave in I, V5 and V6  
ST and T wave displacement opposite to the major deflection of the QRS complex

Q. In cellular signalling, what different mechanisms do receptors employ to transduce an extracellular chemical signal into an intracellular event?

**Ans/** 1-MEMBRANE-BOUND RECEPTORS WITH 1-INTEGRAL ION CHANNELS -LIGAND-GATED ION CHANNELS  
2. MEMBRANE-BOUND RECEPTORS WITH INTEGRAL ENZYME ACTIVITY.  
3. MEMBRANE-BOUND RECEPTORS WITH NO INTEGRAL ENZYME OR CHANNEL ACTIVITY – SEVEN TRANSMEMBRANE DOMAIN RECEPTORS (7TMDR)

Q. What is ischemic chest pain?

**Ans/** It's a symptom of heart disease, and it happens when something blocks your arteries or there's not enough blood flow in the arteries that bring oxygen-rich blood to your heart. It's sometimes called angina pectoris or ischemic chest pain

Q. The cellular change of apoptosis?

**Ans/** Cellular breakdown including cell shrinkage, chromatin condensation and nuclear changes, membrane blebbing, and formation of apoptotic bodies, which are then phagocytosed

Q. Benign tumour are :- well differentiate)

**Ans/ Benign:** Grow slowly, well- differentiated , no invasion or metastasis to surrounding tissue ,spherical or ovoid in shape

**Malignant:** Grow rapidly , undifferentiated , invasion and metastasis to surrounding tissues , irregular in shape

Q. Describe the connective tissue's around muscle?

**Ans/** 1- epimysium: external sheath of dense irregular C.T, surround entire muscle

2-perimysium: thin C.T layer ,surround each fascicles

3- endomysium: very thin layer of reticular fibers

Q. What's the difference between the cardiac syncope and neuro cardiogenic syncope ?

**Ans/** Cardiac syncope: due to mechanical cardiac dysfunction or arrhythmia

Neurocardiogenic syncope: abnormal autonomic reflex cause bradycardia and/or hypotension

Q. Describe these variant angina . IHD . Stable angina?

**Ans/**

<b>IHD .....</b> Condition in which imbalance between myocardial oxygen supply and demand results in myocardial hypoxia and accumulation of waste metabolites, most often caused by atherosclerotic disease of the coronary arteries (often termed coronary artery disease).	<b>Stable angina.....</b> Chronic pattern of transient angina pectoris, precipitated by physical activity or emotional upset, relieved by rest within a few minutes; episodes often associated with temporary depression of the ST segment, but permanent myocardial damage does not result.
<b>Angina pectoris .....</b> Uncomfortable sensation in the chest and neighboring anatomic structures produced by myocardial ischemia.	<b>Variant angina .....</b> Typical anginal discomfort, usually at rest, which develops because of coronary artery spasm rather than an increase of myocardial oxygen demand; episodes often associated with transient shifts of the ST segment, usually ST elevation (also termed Prinzmetal angina)

Q. List four conditions in granulomas:

**Ans/** Tuberculosis, Leprosy, Syphilis, Cat-Scratch disease. There is also Sarcoidosis and Crohn disease.

Q. What and is mean of activation and inactivation of voltage gated ion channel?

**Ans/** Activation is the process of opening the gate, which occurs in response to changes in the membrane potential(depolarization), and 'deactivation' is the opposite process which results in closing the gate closing in response to repolarization

Q. Sartorius muscle is innervated by which nerve?

**Ans/** femoral nerve

Q. Name 4 type of tissue necrosis

**Ans/** 1)coagulative 2)liquefactive 3)fat 4) gangrene

Q. Describe how membrane transporter mechanisms and ion channels contribute to the maintenance of ion and solute gradients across membranes, and how these mechanisms regulate pH and cell volume

**Ans/** They expel H<sup>+</sup> to oppose acidification and expel HCO<sub>3</sub><sup>-</sup> to oppose alkalisation that how they regulate pH , and they expel ions for response to cell swelling and enter ions in response to cell shrinking that how they regulate cell volume

Q. Why doesn't aortic valve close as soon as heart muscle begins to relax?

**Ans/** Valve close when interventricular pressure falls below arterial pressure and blood start to backflow

Q. In which way the membrane transport processes contribute in the regulation of intracellular pH

Ans/ They expel  $H^+$  to oppose acidification and expel  $HCO_3^-$  to oppose alkalisation that how they regulate pH

Q. Boundaries of the axilla and its content

Ans/ there are 4 borders of axilla

Anterior wall:-formed by the pectoralis major, subclavius and pectoralis minor muscles.

Posterior wall:-by the subscapularis, latissimus dorsi and teres minor muscles.

Medial wall:-serratus anterior muscle.

Lateral wall:-by the coracobrachialis and biceps brachii muscles.

Contents of axilla:- axillary artery and veins, brachial plexus.

Q. Write short note on the conducting system

Ans/ Consist of specialized tissue that stimulate contraction and regulate heart rate. Consist of SA node and bundle of His.

Q. Differences between regeneration and repair

Ans/ Both of them cells proliferate but in regeneration there is no scar formation while in repair there will be scar formation.

Q. What are the most important membrane transport mechanisms involved in the transport of the  $K^+$  and  $Ca^{2+}$  and  $Na^+$

Ans/  $Na^+/K^+$  pump, PMCA, SERCA,  $Na^+/Ca^{2+}$  exchanger,  $Na^+/H^+$  exchange, Mitochondrial  $Ca^{2+}$  uniporter

Q. Describe the blood supply to the upper limb

Ans/ Arm supplied by brachial artery, forearm and hand by radial and ulnar arteries

Q. What is granulation

Ans/ Granulation tissue is formed by proliferation of fibroblast and neovascularisation have role in secondary healing

Q. If blood supply to the tissue of an organ via low resistance artery feeding high resistance arteriole which vessel determine how much blood flow in pressure constant? What will change if artery partially occlude?

Ans/ Arterioles, resistance of arterioles will decrease

Q. List stages of migration neutrophil to the inflammatory site respectively?

Ans/ 1)margination 2)rolling 3)adhesion 4)emigration

Q. What is cause of osteomalacia in adult and rickets in children

Ans/ Vitamin D deficiency in adult, vitamin D deficiency and lack in Calcium in children

Q. In rectal examination you need what ask the patient???

Ans/ resting

Q. The site of the cell doesn't have blood supply?

Ans/ cartilage and epithelium and cornea

Q. Neurological conditions that affect peripheral nervous system cause peripheral hypotonia include

Ans/ 1) muscular dystrophy

2) myasthenia gravis

3) spinal muscular atrophy

4) Charcot-Marie-Tooth disease

Q. What is role of carbohydrate in the membrane ( communication )

Ans/ Give attach to proteins and lock orientation of protein by preventing flip flop movement.

Q. Two solution that are different in concentration.when placed in partial permeable membrane what will be occurred (solvent move from high concentration to low concentration).

Ans/ The movement of the solvent will be continues until the system come into equilibrium and then there will be no net movement

Q. List the motions of phospholipids in the plasma membrane?

Ans/ 1-Intra chain motion  
2-fast axial rotation  
3-fast lateral rotation  
4-flip flop (transverse)

Q. Stages of bone healing and time of each step?

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-remodelling .

Q. In response to injury hypothesis , the model views atherosclerosis as chronic inflammatory response of the arterial wall to endothelial injury:

Ans/ 1. Endothelial injury—and resultant endothelial dysfunction—leading to increased permeability , leukocyte adhesion and thrombosis  
2. Accumulation of lipoproteins(mainly oxidized LDL and cholesterol crystals)in the vessel wall, Platelet adhesion  
3. Monocyte adhesion to the endothelium ,migration into the intima , and differentiation into macrophages and foam cells  
Lipid accumulation within macrophages, which release inflammatory cytokines  
4. Smooth muscle cell recruitment due to factors released from activated platelets, macrophages, and vascular wall cells  
5. Smooth muscle cell proliferation and ECM production

Q. What the major cytokine involve in fibrosis

Ans/ TGF-B

Q. Difference between seizure and syncope?

Ans/

	<u>Seizure</u>	<u>Syncope</u>
Aura (e.g. olfactory) <i>رائحة غريبة</i>	+	—
Cyanosis	+	—
Lateral tongue-biting	+	—/+
Post-ictal delirium	+	—
Post-ictal amnesia	+	—
Post-ictal headache	+	—
Rapid recovery	—	+

Q. Causes of iron deficiency?

Ans/ Chronic blood loss, increased demand, malabsorption of iron, inadequate iron intake, intravascular haemolysis and hemoglobinuria, combinations.

Q. What are the causes of nausea and vomiting in kidney diseases?

Ans/ • **Renointestinal Reflexes:**

They arise because of the common autonomic and sensory innervations of the two systems.....  
pylorospasm

• **Organ Relationships:**

The right kidney is closely related to the hepatic flexure of the colon, the duodenum, head of the pancreas, the common bile duct, the liver, and the gallbladder. The left kidney lies just behind the splenic flexure of the colon and is closely related to the stomach, pancreas, and spleen.

• **Peritoneal Irritation:**

The anterior surfaces of the kidneys are covered by peritoneum. Renal inflammation, therefore, causes peritoneal irritation, which can lead to muscle rigidity and rebound tenderness.

Q. Boundaries of the popliteal fossa?

Ans/ \***Laterally:** Biceps femoris above and the lateral head of the Gastrocnemius and Plantaris below.

\***Medially:** Semimembranosus and Semitendinosus above and the medial head of the Gastrocnemius below.

\***Floor:** popliteal surface of the femur and the popliteus muscle.

\***Roof:** skin and fascia

Q. Definition of the pinocytosis /phagocytosis /transmembrane **بیرمنه ماوه**/receptor mediated endocytosis?

Ans/ \***Pinocytosis:** also known as fluid endocytosis, an endocytotic vesicle encloses a small volume of extracellular fluid. This process is nonspecific because the vesicle simply engulfs the water in the extracellular fluid along with whatever solutes are present. These solutes may include ions, nutrients, or any other small extracellular molecule.

\***Receptor mediated endocytosis:** process which large, hydrophilic molecules can enter cells by associating with a cell surface receptor.

\***Phagocytosis:** cells engulf bacteria or large particles such as cell debris from damaged tissues. In this form of endocytosis, extensions of the plasma membrane called pseudopodia fold around the surface of the particle, engulfing it entirely.

Q. Inhibitor of the cAMP?

Ans/ phosphodiesterase



Q. 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 <i>in situ</i>

Q. Write down the origin/insertion/nerve supply/blood supply of the external rotators of the hip?

Ans/ External rotators of the hip are Piriformis, Obturator externus, Obturator internus, Superior gemellus, Inferior gemellus, Quadratus femoris.

#### piriformis

Origin	Anterior surface of lateral process of sacrum and gluteal surface of ilium at the margin of the greater sciatic notch
Insertion	Superior border of greater trochanter
Action	Lateral rotator of the hip joint; also helps abduct the hip if it is flexed
Innervation	Piriformis nerve (L5, S1, S2) (L5, S1, S2)
Arterial Supply	Superior and inferior gluteal and internal pudendal arteries

#### Obturator Externus

Origin	External surface of obturator membrane and anterior bony margins of obturator foramen
Insertion	Trochanteric fossa on the medial surface of the greater trochanter
Action	Rotates the thigh laterally; also helps adduct thigh
Innervation	Posterior division of obturator nerve innervates most of the obturator externus; (L3, L4)
Arterial Supply	Obturator and medial circumflex femoral arteries

#### Obturator Internus

Origin	Internal surface of obturator membrane and posterior bony margins of obturator foramen
Insertion	Medial surface of greater trochanter of femur, in common with superior and inferior gemelli
Action	Rotates the thigh laterally; also helps abduct the thigh when it is flexed
Innervation	Nerve to the obturator internus and superior gemellus -- a branch of the sacral plexus (L5, S1) (L5, S1)
Arterial Supply	Internal pudendal and superior and inferior gluteal arteries

#### Superior Gemellus

Origin	Ischial spine
Insertion	Medial surface of greater trochanter of femur, in common with obturator internus
Action	Rotates the thigh laterally; also helps abduct the flexed thigh
Innervation	Nerve to the obturator internus and superior gemellus -- a branch of the sacral plexus (L5, S1) (L5, S1)
Arterial Supply	Inferior gluteal artery

#### Inferior Gemellus

Origin	Posterior portions of ischial tuberosity and lateral obturator ring
Insertion	Medial surface of greater trochanter of femur, in common with obturator internus
Action	Rotates the thigh laterally; also helps abduct the flexed thigh
Innervation	Nerve to the quadratus femoris and inferior gemellus
Arterial Supply	Inferior gluteal artery

#### Quadratus Femoris

Origin	Lateral margin of obturator ring above ischial tuberosity
Insertion	Quadratus tubercle and adjacent bone of intertrochanteric crest of proximal posterior femur
Action	Rotates the hip laterally; also helps adduct the hip
Innervation	Quadratus femoris branch of nerve to the quadratus femoris and inferior gemellus (L5, S1) (L5, S1)
Arterial Supply	Medial circumflex femoral artery, inferior gluteal artery, 1st - 4th perforating arteries, obturator artery, and some superior muscular branches of popliteal artery

## "Multiple choice "

Q. The axillary

Q. The median nerve

Q. kidney pain:

Q. breathlessness:

Q. Which of the following are membrane transport protein that use protein monomer to phosphorylate target protein:


Q. inhibitor la first phase kamaya?

Q. bo chy druge esh naka dway nanxwardn?

Q. according to brachial plexus

Q. which of following necessary to evaluate palpitation?

Ans/ ٲمٲٲٲ ٲمٲٲٲٲ ٲمٲٲٲ ٲمٲٲٲ

 16.6 How to evaluate palpitation

- Is the palpitation continuous or intermittent?
- Is the heart beat regular or irregular?
- What is the approximate heart rate?
- Do symptoms occur in discrete attacks?  
Is the onset abrupt? How do attacks terminate?
- Are there any associated symptoms?  
Chest pain, lightheadedness, polyuria (a feature of supraventricular tachycardia, p. 473)
- Are there any precipitating factors, such as exercise or alcohol excess?
- Is there a history of structural heart disease, such as coronary artery disease or valvular heart disease?

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Q. Which is not the cancer categories type ? (MCQ)

Ans/hemangioma is benign tumor

Q. In acute inflammation what cause insulin resistance:

A) IL- 1 TGF

B) IL- 6 TGF

C) IL- 6 IL 1

D) all

Q. Granulation :

A- doesn't contain fibroblast

B- contain blood vessel

C- more important in first intention than second

D- not important for bone remodeling

Q. Exclude myocardial infarction:

A) Akinesia on echocardiography

B) total cut on coronary Angiography

C) chest pain more than 20 minutes

D) chest pain lasting 20\_30 min with negative cardiac enzymes

Q. All are non-cardiac cause of secondary unstable angina/ NSTEMI except :

A) GI bleeding

B) severe hypertension

C) severe anemia

D) sepsis

Q. Choose the odd answer :

A) Sympathetic vasomotor tone tending smooth muscle of arterioles to relax more

B) Adrenaline which secret from adrenal medulla acts on GUT only

C) There is not Autonomic supply to the lungs

D) Vasomotor tone varies from organic to organ

Q. Choose the odd answer:

- A) Blood flow is turbulent in most vessels
- B) Blood flow become turbulent when the velocity exceed on critical value
- C) The resistance to flow when it is turbulent slower than when it is laminar
- D) Turbulent flow occur only in very small Blood vessel

Q. Neutrophil Stick to endothelium by :

- A) Healing process
- B) hemostasis, inflammation, proliferation, and remodeling.

Q. Which of the following antagonise acetyl cyclase:

- A- CAMP
- B- Activated GTP alpha subunit

نعم دوو پرسپاره هملیزار دنه کاتیان تمواو نین

Q. Which one is involved in the dissolution of a clot?

- A- plasmin
- B- firbrinogen
- C- thrombin
- D- hagoman factor

Q. In the normal blood vessel wall endotheliam and small muscle cell located which layers respectively?

- A- Intima-media
- B- Media-intima
- C- Intima-intima
- D- Media-media

Q. Which one of the following is false about D-dimers?

- A) Product of complete lysis of fibrin
- B) Released when plasmin acts on fibrin
- C) Relatively specific test of fibrin degradation
- D) Relatively specific test of fibrinogen degradation

Q. The predisposing factors to atheroma formation include all except:

- A) Diabetes mellitus
- B) Hypertension
- C) Hyperthyroidism
- D) Inflammation

Q. Neurotransmitters are released to the synapses at

- A) presynaptic membrane
- B) postsynaptic membrane
- C) axon hillock

Q. Cause of leg swelling/edema during travel ?

- A) Gravity
- B) DVT
- C) Muscle relax
- D) Drunk A lot of water

Q. Reversible hypoxia, choose odd:

A. ATP level falls

B. Ribosome detachment from ER

C. Mitochondria swell

D. Lysosomal disruption

Q. Rolling of neutrophils:

A. Selectin phase

B. Chemokines

C. Integrin phase

Q. Membrane mainly composed of:

A) integral protein

B) glycoprotein

C) phospholipid

D) carbohydrate

Q. All of the following have cough symptom except:

A. Pneumonia

B. Asthma

C. COPD

D. Pharyngitis

Q. All following are cardiac cause of palpitation except?

A/hyperthyroidism

B/etopic beat

C/tachyarrhythmia

Q. All following are cardiac cause of palpitations except:

A. Hyperthyroidism

B. Ectopic beat

C. Tachyarrhythmia

D. None

(Because all of them cause palpitation)

Q. Which of these options is true for iron deficiency anaemia?

A. Giving bottle milk to infants cause iron deficiency

B. Giving breast milk to infant cause iron deficiency

C. GI bleeding is a rare cause of iron deficiency in men

Q. Choose the odd one out (CVS)

A) the resistance of a tube is the ratio of the pressure gradient to flow

B) the resistance of a tube increases, but supply pressure remains same, the flow increases

C) if the flow through a tube is constant, and the resistance increases, the pressure gradient from one end of a tube to the other end decreases

D) if two tubes with equal resistance are connected in series, the resistance of combination is half of the two

Q. The following are cardiovascular causes of breathlessness ,except :

A- pulmonary hypertension

B- Angina

C- pulmonary embol

D - Anemia

Q. The first common thing which happens in hypoxia and toxic injury is: (MOD)

- a. ATP depletion
- b. Entry of calcium
- c. DNA damage
- d. Loss of cellular component

Q. In the chronic inflammation giant cells are multi nucleate cells made by fusion of: (MOD)

- a. Fibroblast
- b. Lymphocyte
- c. Eosinophil
- d. Macrophage

Q. The movement of the water across a selectively permeate Membrane without the use of any energy is called

- A- endocytosis
- B-diffusion
- C-active transport
- D-osmosis

Q. The anatomical position can be described as follows ,except:

- A-Body upright in the vertical axis
- B-Legs and feet parallel
- C-Arms hanging by sides
- D-Palms pronated and face are directed forward

Q. Which of the following factors are inactivated by protein C ? (MOD)

- A- II , IX , X
- B- VII, III
- C- XII , XI
- D- V , VIII

Q. Chronic inflammation characterized by all of below,except ? ( MOB)

- A - Tissue distraction
- B - angiogenesis
- C - Inflammation with neutrophils
- D - Increase tissue concentration of lymphocytes

Q. Regarding to limb development

- a- the apical ectodermal region is mesoderm which controls the development of limb
- b- in the six weeks of development buds flatten to form feet and hand
- c- toes and fingers are formed in the progressive zone
- d- is there rotation of the limb this occurs in the 10 week of development

Q. Regarding to the median nerve

- a- Median nerve is originate from the lateral side of brachial plexus of axilla
- b- In the cubital fossa median nerve is lateral to the brachial artery
- c- Median nerve supply brachial artery and the elbow joint
- d- Median nerve supplies the muscles of the forearm

Q. Choose the odd answer:

- A) Blood flow is turbulent in most vessels
- B) Blood flow become turbulent when the velocity exceed on critical value
- C)The resistance to flow when it is turbulent slower than when it is laminar
- D) Turbulent flow occur only in very small Blood vessel

Q. Consequence of ATP depletion?

A- ER swelling

B- clumping of nuclear chromatin

C- lipid deposition

D- activation of cellular enzymes

Q. In acute inflammation arteriolar dilation leads to

A- increase osmotic pressure

B- increase hydrostatic pressure

C- both

D- none

Q. The movement of the phospholipid side to side is known as :

a. Extracellular diffusion

b. Intercellular diffusion

c. Flip-flop

d. Lateral diffusion

Q. A cell with \_\_\_\_\_ in a hypotonic solution

a. Swell, cell bursts

b. Shrink

c. No change in the size

d. Change in the size the small become large and the large become small

Q. In addition to fenestrated or continuous capillary (sinusoids) found in

A-liver/kidney

B-liver /bonemarrow/ spleen

C-spleen/spinal cord

D-kidney/bonemarrow/spleen

Q. In the scapula:

A)lies on the posterior wall between the second and tenth ribs

B)It articulates with acromial extremity of the clavicle and head of humerus

C)winged scapula caused by paralysis of trapezius muscle

D)Rhomboid major and minor inserted into medial border of scapula

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Q. In hand

A)The flexor retinaculum attached to scaphoid, lunate and capitate bone

B)scaphoid is the largest bone in carpal bones

C)All of the flexor tendons pass beneath flexor retinaculum

D)wrist joint is articulation of articular surface of ulna with scaphoid and lunate bones

Q. Choose the correct one

A)  $R = P/F$

B) if pressure is constant ' when blood flow increases ' resistance will increase

C) if blood flow is constant ' when pressure decreases ' resistance increases

D) if two tubes of equal resistance are connected together in series ' the resistance of the combination is half that of each tube alone

Q. Choose the odd answer (CVS)

- 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

Q. Symptoms of bladder outlet obstruction :

- A- Hesitancy
- B- Dribbling
- C- Dysuria
- D- Interment urinary system

Q. Clinical indication of segmented urine culture and examination including following, except:

- A) localization of urinary tract
- B) بائش بيرم نبيه (prostatitis in male and cystitis in female)
- C) to differentiate bacterial or non bacterial, inflammatory or non inflammatory
- D) بائش بيرم نيه (prostatitis or urethritis)

Q. Which of the following are true about granulation tissues

- A- It contains new capillary loops
- B- it contains collagen
- C- It formed during the wound healing
- D- All

Q. Extrinsic pathway of coagulation cascade initiates with

- A- Factor 2
- B- Factor 3
- C- Nitric oxide
- D- Factor 7 I

Q. VB3:

- A- a 10ml of urine after 100-200ml of urination in total.
- B- positive culture indicates urethritis
- C- like EPS, VB3 isolate microorganisms cause prostatitis
- D- like VB1, VB3 isolate microorganisms cause urethritis
- E- All of the above true

Q. According to NIKKD/NIH prostatitis classification type IV prostatitis

- A- it is histological prostatitis
- B- it is asymptomatic prostatitis
- C- do not need treatment
- D- all of above are true

Q. These are cardiovascular causes of breathlessness, Except;

- A- Angina
- B- Anaemia ✓
- C- Pulmonary embolism
- D- Pulmonary hypertension

Q. Choose the odd one

A. Pulmonary Valve and aortic Valve Close in systole.

B. isovolumic contraction increases ventricular pressure without change in ventricular volume

C. mitral valve opens after 800 ms of aortic valve close

D. aortic valve open after 400 ms of pulmonary valve close

Q. Choose the odd one

A. noradrenaline act on  $\beta_2$  receptors in the heart

B. acetylcholine act on nicotine ach receptor in heart

C. acting of parasympathetic n.s cause increase heart rate

D. sympathetic n.s cause heart beat above 100bpm