

**GoldStandard FCPS:**

**Surgery & Allied**

**20th November 2019 Night** 

**(Errors and omissions excepted)**

**Cram Statements**

* **Pellagra is caused by deficiency of which vitamin?------>Niacin**

 Pellagra is a disease caused by a lack of the vitamin niacin (vitamin B3)

* **absorption of glucose in kidneys occurs through ------>Secondary active transport**

. The process of renal glucose reabsorption is mediated by active (sodium-coupled glucose cotransporters) and passive (glucose transporters) transporters.

* **antiseptic used to clean the floor after surgery of a HIV ------>1% hypochlorite**

Laboratory studies have demonstrated the factors that enable bleach to kill HIV in a controlled setting. In most cases, undiluted (or full-strength) bleach(hypochlorite) is more effective at killing HIV in syringes than diluted bleach.

* **boundaries of Posterior triangle of the neck?------>Covered by investing layer of deep cervical fascia**

Anterior – posterior border of the sternocleidomastoid.  
Posterior – anterior border of the trapezius muscle.  
Inferior – middle 1/3 of the clavicle.  
The posterior triangle of the neck is covered by the investing layer of fascia, and the floor is formed by the prevertebral fascia (see fascial layers of the neck).

* **breast lesion occurs bilaterally?------>Lobular carcinoma**

Thirty-six percent of the patients with bilateral disease had lobular cancer in at least one breast. .

* **childhood tumor with gene amplification?------>Neuroblastoma**

Neuroblastoma is the second most common solid tumor occurring in children. Amplification of the MYCN oncogene is associated with poor prognosis.

* **cystic swelling between labia majora and minora arises from------>Greater vestibular gland**

The Bartholin's  glands are located on each side of the vaginal opening. These glands secrete fluid that helps lubricate the vagina. Sometimes the openings of these glands become obstructed, causing fluid to back up into the gland. The result is relatively painless swelling called a Bartholin's cyst.

* **factor 8best source is?------>Cryoprecipitate**

Cryoprecipitate is rich is factor VIII, von Willebrand factor, factor XIII, and fibronectin. Most importantly, it is the only blood component that contains concentrated fibrinogen and thus the main indication for use is in treatment of coagulopathy due to hypofibrinogenemia.

* **hormone stimulates release of FSH and LH?------>GnRH**

Gonadotropin-Releasing Hormone. Gonadotropin-releasing hormone (GnRH) is a decapeptide secreted by hypothalamic neurons, which stimulates the synthesis and secretion of both luteinizing hormone (LH) and follicle-stimulating hormone (FSH) by pituitary gonadotrope cells.

* **Least amount of minerals are found  
  in?   
  ------>Tubers**

Tubers are less rich in minerals

* **least infarcted in arterial supply blockage?  
  ------>Liver**

The reduction of arterial blood flow will not damage significantly the liver due to its dual blood supply from hepatic artery and portal vein

* **Lymphatic drainage of labia majora------>Superficial inguinal nodes**

Lymphatic drainage occurs through two systems: one superficial and one deep within the subcutaneous tissue primarily draining into the inguinal nodes.

* **membranous labyrinth, ------>Contains organs of hearing and balance**

Inner ear, also called labyrinth of the ear, part of the ear that contains organs of the senses of hearing and equilibrium. The bony labyrinth, a cavity in the temporal bone, is divided into three sections: the vestibule, the semicircular canals, and the cochlea.

* **mitochondrial mutations:------>Only transmitted from mother**

Mitochondrial DNA is the small circular chromosome found inside mitochondria. ... The mitochondria, and thus mitochondrial DNA, are passed almost exclusively from mother to offspring through the egg cell.

* **Mononuclear  
  phagocytosis originates from  
  ------>Bone marrow**

Mononuclear phagocytic cells are derived from precursor cells in the bone marrow. These precursors develop into monocytes and dendritic cells, phagocytic cells that are released into the bloodstream. ... In tissues, monocytes develop into much larger phagocytic cells known as macrophages

* **neurotransmitter in post synaptic and autonomic nervous system?  
  ------>Nor epinephrine**

Outside the brain, norepinephrine is used as a neurotransmitter by sympathetic ganglia located near the spinal cord

* **numbness of medial arm and atrophy of small muscles of hand. Cause------>Cervical rib**
* **organism produce greenish pus discharge from post-op wounds?------>Pseudomonas**

Pseudomonas aeruginosa: The versatile "blue-green pus bacteria" that opportunistically infects people, especially those who are immunocompromised. ... The characteristic color of the pus is due to a bluish pigment (pyocyanin) and a greenish pigment produced by pseudomonas.

* **pain in the epigastric region after a fatty meal. Cause?------>Gall bladder**

The most common symptom of a gallbladder problem is pain. This pain usually occurs in the mid- to upper-right section of your abdomen. It can be mild and intermittent, or it can be quite severe and frequent. In some cases, the pain can begin to radiate to other areas of the body, including the back and chest.Pain that worsens after eating a heavy meal, particularly fatty or greasy foods.

* **painless testicular swelling, biopsy shows mature stem cells. diagnosis?------>Teratoma**

Transplantation of pluripotent embryonic stem cells (ESC) into immune-deficient mice results in the formation of complex teratomas consisting of derivatives from all three germ layers.

* **painless testicular swelling. Labs show increased LDH. diagnosis?------>seminoma**

LDH is a cellular enzyme found in every tissue in the body. ... LDH is less specific for testis cancer than HCG or AFP. However, elevated LDH levels are correlated to high tumor burden in seminoma and recurrence in NSGCT.

* **parasympathetic ganglia in sigmoid colon receive preganglionic fibers from which segment of spinal cord?------>S2, 3. 4**

 Pelvic splanchnic nerves or nervi erigentes are splanchnic nerves that arise from sacral spinal nerves S2, S3, S4 to provide parasympathetic innervation to the hindgut.

* **premalignant lesion leads to SCC ------>Actinic keratosis**

Typical precancerous skin lesions include lentigo maligna, which may develop into malignant melanoma, and actinic keratosis, which may develop into squamous cell carcinoma.

* **prolapse uterus and intact anal canal. Damaged structure------>Pelvic diaphragm**

Uterine prolapse occurs when weakened or damaged muscles and connective tissues such as ligaments allow the uterus to drop into the vagina. ... Treatment options include pelvic floor exercises, vaginal pessaries and surgery

**pt developsprolactin excess. cells most likely to be increased------>Eosinophils**

hormone production of the human gland with the cytology. Hyperplasia of the eosinophilic cells had long been as sociated with gigantism or acromegaly.

* **right ventricle has------>Origin of Pulmonary trunk**

The pulmonary trunk is a major vessel of the human heart that originates from the right ventricle. It branches into the right and left pulmonary arteries, which lead to the lungs.

* **structure is not visible in indirect laryngoscope?------>Pyriform sinus**

The pyriform sinus (also spelled piriform sinus and also known as the pyriform recess, pyriform fossa, and smuggler's fossa) is the pear-shaped subsite of the hypopharynx located posterolaterally to either side of the laryngeal opening. Direct laryngoscopy confirmed the diagnosis of bilateral piriform sinus fistula

* **study in a population comparing symptoms in diseased & lack of symptoms in non-diseased. Type of study?------>Case control**

A case–control study (also known as case–referent study) is a type of observational study in which two existing groups differing in outcome are identified and compared on the basis of some supposed causal attribute.

* **tall man with sudden excruciating chest pain, epigastric pain radiating to the back and dyspnea. With hypotention. Diagnosis?------>Dissecting aortic aneurysm**

Typical signs and symptoms include Sudden severe chest or upper back pain, often described as a tearing, ripping or shearing sensation, that radiates to the neck or down the back.Sudden severe abdominal pain.Shortness of breath

* **The primary oocytes complete their  
  first meiotic division?  
  ------>Before ovulation**

The oocyte (eggs, ova, ovum) is arrested at an early stage of the first {{meiosis))(first meiotic) division as a primary oocyte (primordial follicle) within the ovary. Following puberty, during each menstrual cycle, pituitary gonadotrophin stimulates completion of meiosis 1 the day before ovulation

* **The skin at areas most prone to  
  abrasions, damage   
  ------> Stratified squamous  
  keratinized**

Keratinized. Keratinized surfaces are protected from abrasion by keratin and kept hydrated and protected from dehydration by glycolipids produced in the stratum granulosum. Examples of keratinized stratified squamous epithelium include epidermis of the palm of the hand and sole of the foot, and the masticatory mucosa.

* **2 weeks later after hepatitis A, the liver biopsy will show?------>Normal histology**

Hepatitis A was characterised by more pronounced portal inflammation than hepatitis but less conspicuous parenchymal changes (focal necrosis, Kupffer cell proliferation, acidophil bodies, ballooning) than found in hepatitis type B

**41 % of hematocrit means?------>41% of formed elements in blood are RBC**

The hematocrit test indicates the percentage of blood by volume that is composed of red blood cells. The condition called "anemia" results from having too few red blood cells.

* **70 kg has total body water of 42L (60% of body weight). How much of this will be present in interstial fluid?------>11.5L**
* **70% of the SA node is supplied by?------>RCA**

The right coronary artery supplies blood to the atrioventricular (AV) node in 90% of people and to the sinoatrial (SA) node in 55%.

* **A lesion in the pyramidal tract ------>loss of Motor function**

pyramidal tracts as they crossover at the level of the pyramids in the medulla. They are collections of upper motor neuron fibers which go to the spinal cord (corticospinal) or the brainstem (corticobulbar) and control the motor function of the body.

* **A new born baby has amputated limb. cause is?------>Amniotic bands**

Amniotic band syndrome is a broad term for a group of congenital abnormalities that occur when bands of amnion (the inner lining of the amniotic sack or "bag of water") peel away from the sack and attach or wrap around parts of the baby's body, disrupting normal developmen

* **A patient cannot recognize opposite side of his body. Damaged------>Primary Somesthetic area**

Lesions affecting the primary somatosensory cortex produce characteristic symptoms including: agraphesthesia, astereognosia, hemihypesthesia, and loss of vibration, proprioception and fine touch (because the third-order neuron of the medial-lemniscal pathway cannot synapse in the cortex).Hemiagnosia is an ,agnosic disorder restricted to one visual hemifield with good recognition of stimuli presented in free vision. This fact implies a dysfunction of the hemisphere contralateral to the agnosic field not compensated by the other hemisphere (otherwise, the hemiagnosia would not be observed).

* **A patient presented on 18th day of her menstrual cycle, phase ?------>Secretory**

leuteal phase of cycle (ref. menstrual fig)

**A person came back from irland and now presented with fever, chills, body aches and postural hypotension. ----🡪Malaria**

Common symptoms of malaria include:shaking chills that can range from moderate to severe high fever.profuse sweating.headache.nausea abdominal pain.hemoglobin (decreased in 25% of patients, often profoundly in young children), platelet counts (thrombocytopenia in 50-68% of patients), and liver function (results abnormal in 50% of patients) In patients with suspected malaria, obtaining a history of recent or remote travel to an endemic area is critical

* **A pt with lacerated wound on thigh 5days back presented with hypotensive & fever. cause?------>Toxemic shock**

Toxic shock syndrome (TSS) is a condition caused by bacterial toxins. Symptoms may include fever, rash, skin peeling, and low blood pressure.

* **A tire factory worker, exposed to hydrocarbons risk?------>Bladder Ca**

The risk of bladder cancer has been shown to be increased in occupations which are likely to involve exposure to polycyclic aromatic hydrocarbons (PAH)

* **A type 1 diabetic with persistent  
  morning hyperglycemia. What should be given?  
  ------>Regular Insulin with Intermediate Insulin twice daily**

confirm source: https://www.ncbi.nlm.nih.gov/pubmed/8314199

* **A young pt with GFR 50%. increase will be------>Creatinine**

When kidneys are damaged, they have trouble removing creatinine from the blood and levels rise. ... A GFR of 60 or over is considered normal, a GFR less than 60 may indicate kidney disease.

* **Adherence of WBC to endothelium is via?------>ICAM**

ICAM-1 (Intercellular Adhesion Molecule 1) also known as CD54 (Cluster of Differentiation 54) ... ICAM-1 is a ligand for LFA-1 (integrin), a receptor found on leukocytes. When activated, leukocytes bind to endothelial cells via ICAM-1/LFA-1

* **After a gunshot injury to the cervical vertebra, the patient now is experiencing respiratory distress. Muscle effected------>Diaphragm**

The phrenic nerve is a nerve that originates in the neck (C3–C5) and passes down between the lung and heart to reach the diaphragm

* **after bee sing, cell of this type of hypersensitivity are?------>Mast cells**

Mast cells reside in vascular and epithelial tissue throughout the body. In a sensitized host (an individual with IgE responses to antigens), re-exposure to antigen leads to type I hypersensitivity responses only in the mast cells exposed to the antigen.

* **antithrombotic is present naturally in blood?------>Plasminogen**

Plasmin is an autologous serum protease that is a key component of the fibrinolysis cascade. Plasmin is a non-specific protease usually present in human serum, and it is responsible for degrading a variety of plasma proteins; its specific physiologic role is to degrade fibrin clots.

* **Apoptosis is initiated by------>Activation of caspases**

Apoptosis caused by CDV is typically induced via the extrinsic pathway, which activates caspases that disrupt cellular function and eventually leads to the cells death

* **Area sensitive to inhalational anesthesia ------>Reticular activity system**

brain areas(reticular activity system)associated to memory and consciousness are more sensitive to inhalational anesthetics

* **Aspiration is prevented by?------>Closure of false vocal cord**

The primary role of the larynx is to separate the air passage for breathing from that for food and drink intake, and to prevent aspiration into the lower respiratory system. ... The vocal folds themselves also participate in prevention of aspiration during swallowing by closing the glottis.

* **ATT side effect inability to differentiate between red and green color to his doctor. Drug?------>Ethambutol**

The most important side effect of ethambutol is retrobulbar neuritis, which presents as blurred vision or decreased peripheral and color vision

* **Bell's phenomenon ------>Eye globe moves upward when he tries to close his eyes**

The Bell's phenomenon, also called the palpebral-oculogyric reflex, refers to the movement of the eyeballs in an upward direction when the eyelids are forcefully closed.

**Blood is warmed up to 37 degrees before transfusion:------>To prevent infection and hypersensitivity (best among options)**

* **cause of a negative Mantoux test in a TB is?  
  ------>Immunosuppressive therapy**

 A common cause of false-negative reactions is anergy. Anergy is the inability to react to a TST because of a weakened immune system.

* **Chromosomal maneuvering does not occur in?------>Asexual reproduction**

- Asexual Reproduction Does Not Apparently Increase the Rate of Chromosomal Evolution:

* **chronic Hep C for many years will show?------>Fibrosis and periportal fibrosis**

Over time, hepatitis C can lead to chronic liver inflammation and cause liver disease. As more and more damage is done to the liver, scarring can occur. This is called fibrosis. Accumulation of this scaring, in turn, can lead to cirrhosis.

* **Chronic Hypervitaminosis A leads to?------>Hepatomegaly**

Hypervitaminosis A, or vitamin A toxicity, occurs when you have too much vitamin A in your body. ... Chronic toxicity can lead to liver damage

* **circulates least in blood stream?  
  ------>Basophils**

Basophils are the least common leukocytes, typically comprising less than one percent

* **C-myc gene disruption is associated with?------>Burkitt lymphoma**

ll types of Burkitt lymphoma are characterized by dysregulation of the c-myc gene by one of three chromosomal translocations. This gene is found at 8q24.

* **Co2 transport is an example of?------>Negative feedback**

Carbon dioxide is regulated by our breathing rate; as the breathing rate increases, the amounts of oxygen inhaled and carbon dioxide exhaled also increase. Control of blood glucose levels is an example of negative feedback.

* **cyst in kidney of an adult. Pattern?------>Autosomal dominant disease**

PKD in adult has autosomal dominanat pattern while in infants it is autosomal recesssive

* **Cysticercosis caused by?------>Ingesting egg of tenia Solium**

Ingestion of T. solium eggs or proglottids which rupture within the host intestines can cause larvae to migrate into host tissue to cause cysticercosis.

* **decreased urine output, increased creatinine and hypertention. Problem in------>Juxtaglomerular**

Excess secretion of renin by the juxtaglomerular cells can lead to excess activity of the renin–angiotensin system, hypertension and an increase in blood volume. ... One cause of this can be increased renin production due to narrowing of the renal artery, or a tumour of juxtaglomerular cells that produces renin.

* **Defecation carried out by?------>Sacral parasympathetic**

CONTROL OF DEFECATION The sacral spinal cord segment parasympathetic preganglionic neurons provide facilitory LMN innervation to the descending colon and rectum via the pelvic nerve and postganglionic neurons within the wall of these portions of the digestive tract.

* **Development of anterior pituitary gland is from?------>Outpouching from stomodeum**

It is well known that the anterior pituitary, composed of pars distalis, pars tuberalis, and pars intermedia, of rep- tiles, birds, and mammals develops from a small outpouch- ing of the stomodeal ectoderm called Rathke's pouch.

* **Diagnosis of Amyloidosis is made by?------>Rectal biopsy**

The rectal biopsy is positive in 73% of cases, the biopsy of bone marrow in bout 50% and the one of gingival mucosa in 40–46 % of cases. Rectal bopsy is confirmatory

* **Diagnostic test for diabetic nephropathy is?------>Microalbuminuria**

Screening for microalbuminuria with a spot urine albumin/creatinine ratio identifies the early stages of nephropathy. Positive results on two of three tests (30 to 300 mg of albumin per g of creatinine) in a six-month period meet the diagnostic criteria for diabetic nephropathy

* **Diphtheria exotoxin has the most toxic effect on?------>Heart**

The diphtheria toxin may spread through your bloodstream and damage other tissues in your body, such as your heart muscle, causing such complications as inflammation of the heart muscle (myocarditis).

* **disease prevent 25 cholecalciferol conversion to 1,25 cholecalciferol?------>Renal failure**

Patients with kidney disease have reduced activity of the enzyme 1-α hydroxylase (CYP27B1) in the kidneys, which converts 25-hydroxyvitamin D (25(OH)D) to its more active form, 1,25-dihydroxyvitamin D (1,25(OH)2D), and thus patients with kidney disease have traditionally been given vitamin D replacement

* **do not cause increase in edema?------>Arteriolar constriction**

myogenic constriction of arterioles in response to elevations in arterial or venous pressure constitutes an important safety factor against edema formation in hydrostatic edema by limiting the increase in capillary pressure and by reducing the number of perfused capillaries,

* **DOC for beta streptococcal pharyngitis (sore throat)  
  ------>Benzathine Penicillin**

Penicillin (10 days of oral therapy or one injection of intramuscular benzathine penicillin) is the treatment of choice because of cost, narrow spectrum of activity, and effectiveness.

* **drug quantity in body can decreased by alkalization of urine to increase its excretion?------>phenobarbital**

*Urine alkalinization increases the urine elimination of chlorpropamide, 2,4-dichlorophenoxyacetic acid, diflunisal, fluoride, mecoprop, methotrexate, phenobarbital, and salicylate*

* **During which stage of sleep do theta- waves appear on EEG?------>NREM stage 1**

Stage 1 – occurs mostly in the beginning of sleep, with slow eye movement. This state is sometimes referred to as relaxed wakefulness. Alpha waves disappear and the theta wave appears

* **ECF is different to ICF in?------>Inorganic Anions**

In ECF Anions include: chloride ( mEq/L) and hydrogen carbonate (HCO3- 22-26 mM). These ions are important for water transport throughout the body.

* **edematous tonsil with yellow colored abscess. The most likely organism involved is?------>Staph aureus**

Staphylococcus aureus is one of the most frequent pathogens in the etiology of tonsillitis and its relevance is due to its antimicrobial resistance and persistence in the internal tissues of the tonsils.

* **effect of acidosis on the body?------>Increased respiration**

 hyperventilation may be a cause of respiratory alkalosis or a compensatory mechanism for metabolic acidosis. Deep sighing respiration (Kussmaul breathing) is a common feature of acidosis (hyperventilation in an attempt to remove carbon dioxide) but may take some hours to appear.

* **End product of purine metabolism is?------>Uric acid**

uric acid (actually hydrogen urate ion) is the final oxidation (breakdown) product of purine metabolism and is excreted in urine,

* **Excitation of nerve trunk ------>Compound potential**

The CMAP idealizes the summation of a group of almost simultaneous action potentials from several muscle fibers in the same area.

* **fall while cycling, presented with anuria. Most likely the lesion is in?------>Urethra**

Straddle injuries (falling on the bicycle bar) can cause of a crush injury of the bulbar urethra between the bar and the pubic bone. This typically occurs with BMX or mountain biking. Such strictures are typically short and with severe fibrosis of the surrounding urethral tissue.

* **Feature of dysplasia are?------>Loss of polarity and architecture**

Architectural features of dysplasia include: Irregular epithelial stratification, loss of normal stratification and polarity, drop shaped rete ridges. Mitoses in the mid and upper epithelium, premature keratinization in single cells (dyskeratosis), basal cell hyperplasia and anaplasia, keratin pearls within rete pegs

* **feature of TB lesion is?------>Caseous necrosis**

Microscopically, the inflammation produced with TB infection is granulomatous, with epithelioid macrophages and Langhans giant cells along with lymphocytes, plasma cells, maybe a few PMN's, fibroblasts with collagen, and characteristic caseous necrosis in the center

* **Fibro vascular tissue with layers of mesothelium. ------>Lung**

 The embryonic and adult lungs are also encased by a thin layer of mesothelial cells. These cells are part of the pleura that provide vital protection and a smooth lubricated surface for movement of this organ

* **First line of defense in lungs is by?------>Alveolar macrophages**

AMs, the resident mononuclear phagocytes of the lung, provide the first line of defence against organisms or particles reaching the lower airways. They must neutralise the invading pathogens or recruit neutrophils and other mononuclear cells.

* **flexion at the metacarpophalangeal joints is by------>Lumbrical muscle**

The lumbricals are intrinsic muscles of the hand that flex the metacarpophalangeal joints and extend the interphalangeal joints.

* **GFR increase when------>Decrease afferent arteriole resistance**

An increase in the afferent arteriolar diameter (decrease in resistance) causes an increase in the glomerular capillary hydrostatic pressure and an increase in GFR.

* **given for Factor 9 in its deficiency?------>FFP**

FFP is commonly used in the setting of coagulopathy including coagulation factor deficiencies and in the setting of intracranial or extracranial bleeding events

* **Gonorrhea diagnosed by?------>Gram stain**

The presence of typical gram-negative intracellular diplococci and polymorphonuclear leukocytes on Gram stain from a specimen collected from a symptomatic male establishes a diagnosis of gonorrhea

* **has hyaline cartilage?------>Larynx**

: A ring of hyaline cartilage that forms the inferior wall of the larynx.

* **Heart muscles works as syncytium due to?------>Gap junction**

A gap junction forms channels between adjacent cardiac muscle fibers that allow the depolarizing current produced by cations to flow from one cardiac muscle cell to the next. ... This network of electrically connected cardiac muscle cells creates a functional unit of contraction called a syncytium

* **Heat loss through evaporation and non-evaporation depends on?------>Core body temperature**

Humans regulate heat generation and preservation to maintain internal body temperature or core temperature.

* **hormone replacement therapy is at increased risk of developing?------>Breast cancer**

Estrogen-only HRT increases the risk of breast cancer, but only when used for more than 10 years. Estrogen-only HRT also can increase the risk of ovarian cancer. The higher breast cancer risk from using HRT is the same for so-called "bioidentical" and "natural" hormones as it is for synthetic hormones.

**How to access the compliance of patient therapy?------>Patient perception of severity of disease and effects after not using the drug**

readily perceived by patient and doctor alike; the goal of any therapy, therefore, was to restore equilibrium. Perception of disease

* **HX of forcep delivery unable to abduct left shoulder and loss flexion of left elbow and inability to supinate left arm. Most probable injury is to?------>Upper brachial plexus**

Patients with upper-trunk palsies are unable to use the shoulder to raise the arm away from the body, have weakness in the arm, and may be unable to bend the arm at the elbow. There may be loss of sensation in the shoulder, outside of the arm, and the thumb.

* **Hypospadias is due to defect in?------>Urogenital folds**

Hypospadias. Hypospadias is an abnormal ventral opening of the urethra that can occur anywhere along the penis, scrotum, or perineum and is caused by underdevelopment of the urogenital folds. I

* **important function of progesterone?  
  ------>Endometrial proliferation**

Progesterone levels rise in the second half of the menstrual cycle. One of progesterone's most important functions is its role in thickening the lining of the uterus each month. The enriched endometrial lining is prepared to receive and nourish a fertilized egg

* **In a neonate of 5kg weight, the estimated blood volume will be?------>420ml**

BloodVol = Weight \* AvgBloodVol in Neonates (85)

* **In hyperosmotic urine there decrease water flow in------>DCT**

When there is a water deficit in the body, the kidney forms a concentrated urine by continuing to excrete solutes while increasing water reabsorption and decreasing the volume of urine formed.

* **Infection of the first web space will be first drained by?------>Infraclavicular lymph node**

Lymph then drains up the arm, passing through a few deep brachial lymph nodes and deltopectoral lymph node(s) with the cephalic vein at the deltopectoral groove, before draining into: infraclavicular lymph nodes: predominantly lateral upper limb and lateral two digits

* **inhales 500 mL each breath with respiratory rate 10 Breaths /min. alveolar ventilation?------>3500 ml/min**

Alveolar minute ventilation is less than minute ventilation and is calculated as ([tidal volume − dead space] × respiratory rate)

* **Insulin independent glucose uptake occurs in?------>Hypothalamus / Exercising muscle**

BRICK LIPS (insulin-independent glucose uptake): Brain, RBCs, Intestine, Cornea, Kidney, Liver, Islet (β) cells, Placenta, Spermatocyte (first aid p 324). Exersising muscle (guyton &hall)

* **Lacunar ligament is medial rolled up part of?------>Reflected inguinal ligament**
* **Left shift of the oxygen dissociation curve due to low pCO2 is known as?------>Haldane effect**

The Haldane Effect (along with the Bohr Effect) facilitates the release of O2 at the tissues and the uptake of O2 at the lungs. This is represented by a right shift of the oxyhemoglobin dissociation curve and a left shift of the oxyhemoglobin dissociation curve respectively.

* **Longest pro-erythrocyte phase seen in?------>P. malariae**

pro-erythrocyte phase in P. malariae is longest among plasmodium species

* **Loud S1, opening snap and mid diastolic rumbling murmur at apex are characteristic finding of?------>Mitral stenosis**

The murmur of mitral stenosis is diastolic, low frequency and referred to as a “rumble. ... the opening snap, then decrescendos ending in mid-diastole. ... S1 over the apex, and this finding is pathognomonic for mitral stenosis.

* **Lymphogranuloma venerum is caused by?------>Chlamydia trachomatis**

Lymphogranuloma venereum (LGV) is a long-term (chronic) infection of the lymphatic system. It is caused by any of 3 different types (serovars) of the bacteria Chlamydia trachomatis.

* **macula densa has?------>Deep basal lamina**

Beneath the macula densa cells, the basal lamina is thin with extensions from the cells passing through it. It is thought that the macula densa cells are sensory cells that respond to the sodium concentration in the fluid within the distal tubule and, perhaps, to the rate of fluid flow past them.

* **Major supply to posterior 1/3ra of the  
  interventricular septum is from?  
  ------>RCA**

The posterior interventricular artery, a branch of right coronary artery, supplies the posterior 1/3 of the interventricular septum. The remaining anterior 2/3 is supplied by the anterior interventricular artery which is a septal branch of the left anterior descending artery, which is a branch of left coronary artery.

* **MCA blood supply?------>Insula and opercula**

The middle cerebral artery (MCA) is one of the three major paired arteries that supply ... sulcus of the insula; courses laterally along the frontoparietal operculum .

* **Mechanism of edema is?------>Hypoalbuminemia with salt retention**

A few other characteristics seen in nephrotic syndrome are: The most common sign is excess fluid in the body due to the serum hypoalbuminemia. Lower serum oncotic pressure causes fluid to accumulate in the interstitial tissues. Sodium and water retention aggravates the edema.

* **Metastatic calcification in kidney is caused by?------>Hyperparathyroidism**

Metastatic calcification is deposition of calcium salts in otherwise normal tissue, because of elevated serum levels of calcium, which can occur because of deranged metabolism as well as increased absorption or decreased excretion of calcium and related minerals, as seen in hyperparathyroidism

* **Middle thyroid vein drain into?------>Internal jugular vein**

The middle thyroid vein (Latin: vena thyreoidea media) collects the blood from the lower part of the thyroid gland, and after being joined by some veins from the larynx and trachea, ends in the lower part of the internal jugular vein.

* **Morphine acts on?------>meu receptors.**

mu receptors mediate opioid rewarding and euphoric properties that underlie their abuse potential

* **most common association with urothelial cancer?------>Bladder extrophy**

 Adenocarcinoma is the most common type in cases of exstrophy of the bladder, accounting for 95% of cases,

* **Most common complication of AIDS?------>Pneumocystis carini**

Antiretroviral therapy (ART) now keeps people with HIV from getting AIDS, and not many of them get PCP. Pneumocystis carinii pneumonia (PCP) is a life-threatening lung infection that can affect people with weakened immune systems, such as those infected with HIV

* **Most common spread by blood transfusion is------>Hepatitis B virus**

The hepatitis B virus is spread when blood, semen, or other body fluid infected with the hepatitis B virus enters the body of a person who is not infected.

* **Mother RH positive and father RH negative conceive a baby. How will you counsel them regarding the child?  
  ------>No complications**

If a mother is Rh-negative and a father is Rh-positive, the father can pass down his Rh-positive blood to the baby (if he's also negative, then there's no problem).

* **multiple rib fractures the abdomen is moving more during breathing. Muscle responsible?------>External intercostals**

A number of muscles are important for respiration. The main inspiratory muscles include the diaphragm, external intercostal and scalene muscles, with accessory muscles being the sternocleidomastoid, pectoralis major and minor, serratus anterior, latissimus dorsi, and serratus posterior superior.

* **Muscle cut in episiotomy is?------>Superior transverse perineal plus Bulbospongiosus**

The anatomic structures involved in a mediolateral episiotomy include the vaginal epithelium, transverse perineal muscle, bulbocavernosus muscle, and perineal skin

* **Myasthenia gravis shows which type of hypersensitivity?------>Type 2**

Myasthenia gravis is an autoimmune disease that's categorized as a type II hypersensitivity that involves autoantibodies binding acetylcholine receptors on skeletal muscle cells

* **necrosis is seen in  
  ischemic brain injury?  
  ------>coagulative necrosis**

Ischemic injury is caused by diminished or absent blood flow. ... Ischemia may be relative or complete, in which case it usually results in coagulative necrosis.

* **Nerve supply to adrenal medulla is from?------>Greater thoracic splanchnic nerve**

 The greater splanchnic nerve (GSN) is the largest of 3 paired sympathetic ... is the sympathetic excitation of the chromaffin cells of the adrenal medulla. .

* **Nucleus ambiguous contains?------>CN 9,10,11**

The nucleus ambiguus is a group of large motor neurons, situated deep in the medullary reticular formation. The nucleus ambiguus contains the cell bodies of nerves that innervate the muscles of the soft palate, pharynx, and larynx which are strongly associated with speech and swallowing.

* **Outline of a cell is preserved necrosis type  
  ------>Coagulative**

Coagulative necrosis is a type of accidental cell death typically caused by ischemia or infarction. In coagulative necrosis the architecture of dead tissue is preserved

* **parameters decreased during moderate exercise?   
  ------>Total peripheral resistance  
  (TPR)**

Total peripheral resistance (tpr)-in anticipation of exercise, the central command increases sympathetic outflow to the heart and blood vessels, causing an increase in heart rate and contractility. venous return is increased by muscular activity and contributes to an increase in cardiac output by the frank-starling mechanism. pulse pressure is increased because stroke volume is increased. although increased sympathetic outflow to the blood vessels might be expected to increase total peripheral resistance (tpr), it does not because there is an overriding vasodilation of the skeletal muscle arterioles as a result of the buildup of vasodilator metabolites (lactate, k+, adenosine). because this vasodilation improves the delivery of 0 2, more 02 can be extracted and used by the contracting muscle.

* **Parasympathetic nerves supplying the urinary bladder are?------>Pelvic splanchnic nerves**

Parasympathetic innervation to the bladder, which modulates contraction of the urinary bladder with opening of the bladder neck to allow voiding, is provided by the pelvic splanchnic nerves. These nerves exit the spinal cord at segments S2-S4.

* **patellar tendon is tapped, ------>Quadriceps femoris contraction**

Striking of the patellar tendon with a reflex hammer just below the patella stretches the muscle spindle in the quadriceps muscle.

* **Pericardiocentisis is best achieved by passing a needle through?------>Left 6th intercostal space at the parasternal border**

pericardiocentesis can be performed without puncturing the lungs. through the 5th or 6th intercostal space at the left sternal border at the cardiac notch of the left lung and is also called as parasternal approach.

* **Primary tumor of heart in adults is?------>Myxoma**

The most common type of primary cardiac tumor is myxoma. Most of these are benign

* **produced by corpus luteum to maintain pregnancy?  
  ------> Progesterone**

Human chorionic gonadotropin signals the corpus luteum to continue progesterone secretion, thereby maintaining the thick lining (endometrium) of the uterus and providing an area rich in blood vessels in which the zygote(s) can develop.

* **Regarding carina:------>Cartilage running anterioposteriorly at trachea bifurcation**

 carina is a cartilaginous ridge within the trachea that runs anteroposteriorly between the two primary bronchi at the site of the tracheal bifurcation at the lower end of the trachea

* **Regarding spinal nerves:------>Exit from intervertebral foramen**

Upon exiting the intervertebral foramen, each spinal nerve gives off a posteriorly directed posterior primary ramus and then continues as the anterior primary ramus (APR).

**Regarding trachoma:------>Inclusion cell conjunctivitis**

Trachoma is primarily caused by serovars A, B, Ba, and C, whereas adult and neonatal inclusion conjunctivitis are caused by serovars B or Ba, D through K, Da, Ia, Ja, Ka, L1, L2, L2a, and L3, which are the sexually transmitted strains of the organism.

* **Remnant of vitellointestinal duct ------>Meckel diverticulum**

A Meckel's diverticulum, a true congenital diverticulum, is a slight bulge in the small intestine present at birth and a vestigial remnant of the omphalomesenteric duct (also called the vitelline duct or yolk stalk).

* **Removal of carbohydrate from proteins results in?------>Aggregation and precipitation**

Protein Precipitation is the process in which protein is separated from any extra contaminants that may be mixed with it. It is an important part of downstream processing and can be done with a variety of different techniques.

* **Rete ridgesy and increased nuclear to cytoplasmic ratio. Diagnosis?  
  ------>Verrocous CA**

the histology of verrucous carcinoma includes a papillary or verrucous surface epithelium with marked keratosis composed of cytologically bland squamous epithelium and subtle, pushing infiltration of the underlying dermis. A heavy inflammatory cell inifltrate may be present in the stroma

* **Right shift of the Oxy-Hb curve will result in decrease of ------>pH**

The standard curve is shifted to the right by an increase in temperature, 2,3-DPG, or PCO2, or a decrease in pH.

* **risk of asbestos exposure. ------>Malignant mesothelioma**

Mesothelioma is a malignant tumor that is caused by inhaled asbestos fibers and forms in the lining of the lungs, abdomen or heart.

* **rupture of bulbar urethra------>Extravasation in Superficial perineal pouch**

However, if the injury to the bulb of the penis results in urethral injury accompanying a tear of the Buck's fascia, then extravasated blood and urine would accumulate in the superficial perineal space, passing into the penis (outer to Buck's fascia) as well as the scrotum and lower anterior abdominal wall.

* **S2 heart sound is due to?------>Isovolumetric relaxation**

When the intraventricular pressures fall sufficiently at the end of phase 4, the aortic and pulmonic valves abruptly close (aortic precedes pulmonic) causing the second heart sound (S2) and the beginning of isovolumetric relaxation.

* **seen in the microscopy of acute appendicitis?------>Neutrophils in muscular wall**

Acute inflammation characterized by infiltration of neutrophils into the mucosa and submucosa is a hallmark of AA

* **sensations of peritoneal irritation by the gastric acid in the lesser sac is carried by?------>Greater splanchnic nerve**
* **similar to Kaposi sarcoma ------>Bacillary angiomatosis**

Kaposi's sarcoma (KS) and bacillary angiomatosis (BA) may be histologically similar. ...

* **Small muscle of hand is supplied by?------>T1**

The small muscles of the hand are supplied chiefly by T1 nerve. ... The adductor pollicis, together with the deep head of the flexor brevis and the first palmar interosseus, is supplied by the ulnar nerve.

* **Sternohyoid s innervated by?------>Ansa cervicalis**

Three of these muscles (sternohyoid, sternothyroid and omohyoid) are innervated by the ansa cervicalis – a nerve loop formed of axons exiting the spinal cord within the ventral rami of C1 to C3 and then joining the cervical plexus.

* **Superficial external pudendal artery passes through?------>Saphenous opening**

It transmits the great saphenous vein and other smaller vessels including the superficial epigastric artery and superficial external pudendal artery, as well as the femoral branch of the genitofemoral nerve.

* **T test is used?------>To compare 2 categories/groups**

t-test: Comparing Group Means. One of the most common tests in statistics, the t-test, is used to determine whether the means of two groups are equal to each other. The assumption for the test is that both groups are sampled from normal distributions with equal variances

* **Tetanus in a population can be prevented by giving?------>Tetanus Toxoid**

Tetanus can be prevented through immunization with tetanus-toxoid-containing vaccines (TTCV)

* **the adverse effect of a drug------>Variable**
* **The aponeurosis of internal oblique muscle forms------>Posterior boundary of inguinal canal**
* **The conducting system of the heart lies in?------>Sub endocardium**

The Purkinje fibres (sub-endocardial plexus of conduction cells) are a network of specialised cells. ... These cells are located in the subendocardial surface of the ventricular walls,

* **The drug of choice for severe Clostridium difficile infection is?------>Vancomycin**

e guidelines recommended oral vancomycin as the treatment of choice for severe initial episodes of CDI.

* **The esophagus passes through  
  esophageal opening with?  
  ------>Vagus nerve and  
  esophageal vessels**

the esophageal hiatus is an opening in the diaphragm through which the esophagus and the vagus nerve pass. It is located in the right crus, one of the two tendinous structures that connect the diaphragm to the spine

* **The fastest nerve conduction ------>A Alpha**

Aα  
13–20 μm 80–120 m/s Responsible for proprioception

* **The largest total cross-sectional area is of?------>Capillaries**

The total cross-sectional area of the capillaries is the greatest; that's why the blood velocity is the slowest through capillaries (this is very important since this is the site of nutrient exchange and you want blood to slow down to allow proper exchange rather than rush past).Even though the cross-sectional area of each capillary is extremely small compared to that of the large aorta, the total cross-sectional area of all the capillaries added together is about 1,300 times greater than the cross-sectional area of the aorta because there are so many capillaries

* **The main support of uterus is by?------>Transverse cervical ligament**

Transverse cervical ligament or cardinal ligament attaches the cervix to the lateral pelvic wall by its attachment to the Obturator fascia of the Obturator internus muscle, and is continuous externally with the fibrous tissue that surrounds the pelvic blood vessels. It thus provides support to the uterus.

* **The size of muscle reduced after cast was applied for. Cause?  
  ------>Temporary decrease of actin and myosin**

Whenever a cast is applied underlying muscles may get decreased in siz temporaily due to decrease in actin and myosin

* **Thirst center stimulated by activation of------>Angiotensin 2**

 Angiotensin (ANG) II is a powerful and phylogenetically widespread stimulus to thirst and sodium appetite.

* **Thoracic duct drain into?------>Junction of left subclavian and internal jugular vein**

The thoracic duct usually starts from the level of the twelfth thoracic vertebrae (T12) and extends to the root of the neck. It It drains into the systemic (blood) circulation at the junction of the left subclavian and internal jugular veins, at the commencement of the brachiocephalic vein.

* **Tunica vaginalis is remnant of?------>Processes vaginalis**

n males, it precedes the testis in their descent down within the gubernaculum, and closes. ... The remaining portion around the testes becomes the tunica vaginalis. And incompletely obliterated remnants of the vaginal process of the peritoneum remaining in the spermatic cord is called the vestige of processus vaginalis.

* **umbilicus, dermatome ------>T10**

pain around umbilicus is carried by dermatome T10

* **uterine prolapse ligament responsible------>Uterosacral ligament**

A uterosacral ligament suspension is an operation designed to restore support to the uterus (womb) or vaginal vault (top of the vagina in a woman who has had a hysterectomy). ... Weakness and stretching of these ligaments can contribute to pelvic organ prolapse.

* **vaccinated 2 weeks back now develops rash all over body and fever. Hb 14, WBC 7x10 and low large platelet. diagnosis?------>ITP**

. One of the most common symptoms of ITP is a skin condition called petechiae. Unexplained bruises. Bleeding from your gums. ITP is diagnosed by identifying a low platelet count on a complete blood count (a common blood test).body may compensate by making abnormally large platelets.

* **Virus causes cancer by alteration in?------>Proto-oncogene**

Most oncogenes began as proto-oncogenes, normal genes involved in cell growth and proliferation or inhibition of apoptosis. If normal genes promoting cellular growth, through mutation, are up-regulated (gain-of-function mutation), they will predispose the cell to cancer and are thus termed oncogenes.

* **Vit K dependent factors are?------>Factor 2, 7, 9, 10**

 The vitamin K - dependent coagulation proteins are synthesised in the liver and comprise factors II, VII, IX, and X

* **weakness if thenar eminence and impaired sensation in the thumb, index middle and medial side of ring finger. Cause?------>Carpel tunnel syndrome**

 While diabetes can be a cause of carpal tunnel syndrome, carpal tunnel syndrome can be a predictor of diabetes and diabetic neuropathy due to this damage done to the nerves.

* **Which is the most potent anti¬oxidant?------>Glutathione**

Glutathione is considered the most powerful endogenous antioxidant with a wide variety of functions in the body. It consists of three amino acids: cysteine, glutamic acid and glycine.

* **yellow cough sputum organism------>Streptococcus Pneumonia**

Yellow sputum is indicative of inflammation. Uniformly rusty-appearing purulent sputum is indicative of pneumococcal (Streptococcus pneumoniae) pneumonia. Bright red streaks in viscid sputum are indicative of Klebsiella pneumoniae pneumonia. Greenish black sputum is indicative of infection with gram-negative bacilli.

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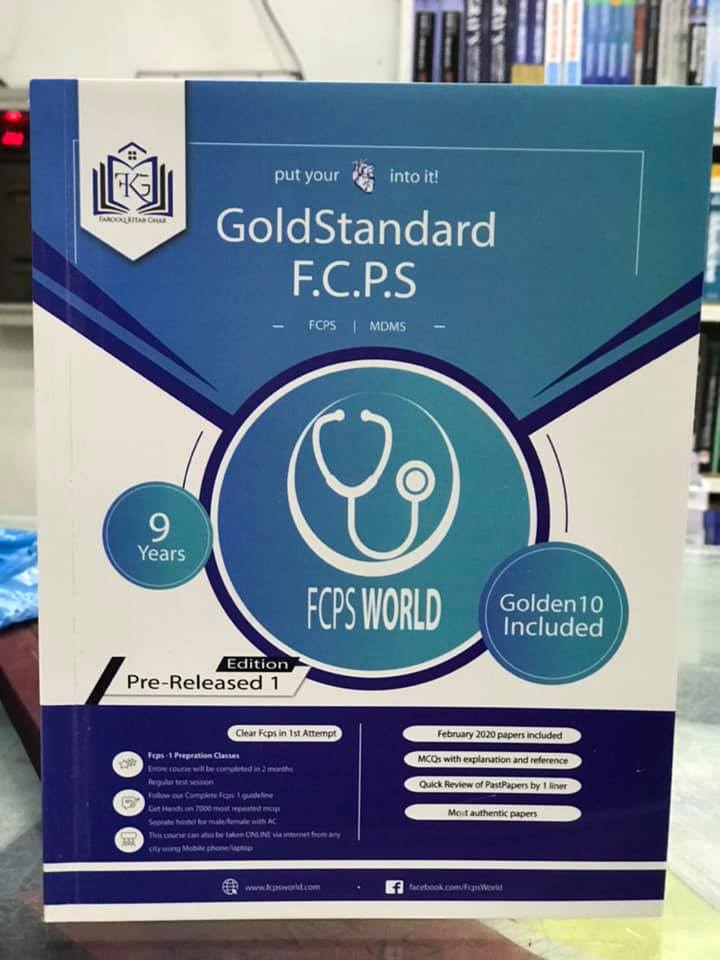
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