**Course Title: General Pathology (MLT 2nd Semester Sec A and B)**

**Final term assignment**

**TIME: 6HRS Marks:50**

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**Section:B**

**Note:**

* **Write in your own words, do not copy paste.**
* **Use only MS word to attempt questions.**

Attempt all questions.Each question carry equal marks.

Q1.What are the circulating cells in acute inflammation?Also write the characteristics of Acute inflammation.

Acute inflammation may be regarded as the first line of defense against injury and is characterized by changes in the microcirculation

The main immune cells involved in acute inflammation are neutrophils. The stasis of circulation allows neutrophils to line up along the endothelium near the site of injury, known as margination. Next, they roll along the endothelium, sticking intermittently.

Characterized as:

Acute inflammation is characterized by 5 cardinal signs: rubor (redness), calor (increased heat), tumor (swelling), dolor (pain), and functio laesa (loss of function).

Q2. Write a note on infarction and its types and write a note on Mast cells.

Infarction is tissue death (necrosis) due to inadequate blood supply to the affected area. It may be caused by artery blockages, rupture, mechanical compression, or vasoconstriction

Infarction occurs as a result of prolonged ischemia, which is the insufficient supply of oxygen and nutrition to an area of tissue due to a disruption in blood supply. The blood vessel supplying the affected area of tissue may be blocked due to an obstruction in the vessel (e.g., an arterial embolus, thrombus, or atherosclerotic plaque).

types:

anotomical:

anterior

posterior

latral

septal

circumferential

According to degree of thickness:

transmunal

laminar

According to age of infaracts:

newly formed

advance infaracts.

MAST CELLS:

A mast cell (also known as a mastocyte or a labrocyte) is a migrant cell of connective tissue that contains many granules rich in histamine and heparin. Specifically, it is a type of granulocyte derived from the myeloid stem cell that is a part of the immune and neuroimmune systems. Mast cells were discovered by Paul Ehrlich in 1877. Although best known for their role in allergy and anaphylaxis, mast cells play an important protective role as well, being intimately involved in wound healing, angiogenesis, immune tolerance, defense against pathogens, and the blood–brain barrier function.

Q3. Which are the cells having proliferative capacity?Explain them,also write about the characteristics of Benign tumor?

Cells of this type include skin fibroblasts, smooth muscle cells, the endothelial cells that line blood vessels, and the epithelial cells of most internal organs, such as the liver, pancreas, kidney, lung, prostate, and breast.

Characteristics of Benign Neoplasms

A benign neoplasm looks a lot like the tissue with normal cells from which it originated, and has a slow growth rate. Benign neoplasms do not invade surrounding tissues and they do not metastasize. Thus, characteristics include:

Slow growth

Resemblance to tissue of origin (well differentiated)

Circumscription

Lack of invasion

Absence of metastases

Benign neoplasms usually arise in a solitary manner (e.g., lipoma of colon, meningioma of brain), but may be multiple (e.g., leiomyomata of uterus, intradermal nevi of skin). Though benign, they may cause problems through mass effect, particularly in tight quarters (pituitary adenoma in the sella turcica).

A hamartoma is a peculiar benign neoplasm which is a localized but haphazard growth of tissues normally found at a given site (pulmonary hamartoma has jumbled cartilage, bronchial epithelium, and connective tissue)

A choristoma is a benign neoplasm consisting of tissue that is not normal to the site of origin (e.g., salivary gland choristoma of the middle ear).

Q4. What is hypovolumic shock?Explain along with its conditions.

Hypovolemic shock is a life-threatening condition that results when you lose more than 20 percent (one-fifth) of your body’s blood or fluid supply. This severe fluid loss makes it impossible for the heart to pump a sufficient amount of blood to your body. Hypovolemic shock can lead to organ failure. This condition requires immediate emergency medical attention.

Hypovolemic shock is the most common type of shock, with very young children and older adults being the most susceptible.

conditions:

The symptoms of hypovolemic shock vary with the severity of the fluid or blood loss. However, all symptoms of shock are life-threatening and need emergency medical treatment. Internal bleeding symptoms may be hard to recognize until the symptoms of shock appear, but external bleeding will be visible. Symptoms of hemorrhagic shock may not appear immediately. Older adults may not experience these symptoms until the shock progresses significantly.

some symptoms:

headache

fatigue

nausea

profuse sweating

dizziness

cold or clammy skin

pale skin

rapid, shallow breathing

rapid heart rate

little or no urine output

confusion

weakness

weak pulse

blue lips and fingernails

lightheadedness

loss of consciousness

Q5.What is Edema?Explain its types also write about the classification of Thrombosis.

Edema is swelling caused by excess fluid trapped in your body's tissues. Although edema can affect any part of your body, you may notice it more in your hands, arms, feet, ankles and legs.

Types of edema:

Peripheral edema:

This affects the feet ankles, legs, hands, and arms. Signs include swelling, puffiness, and difficulty moving a part of the body.

Pulmonary edema:

Excess fluid collects in the lungs, making breathing difficult. This can result from either congestive heart failure or acute lung injury. It is a serious condition, it can be a medical emergency, and it can lead to respiratory failure and death.

Cerebral edema:

This occurs in the brain. It can happen for a range of reasons, many of which are potentially life-threatening. Symptoms include headache, neck pain or stiffness, whole or partial vision loss, change in consciousness or mental state, nausea, vomiting, and dizziness.

Macular edema:

This is a serious complication of diabetic retinopathy. Swelling occurs in the macula, the part of the eye that enables detailed, central vision. The person may notice changes to their central vision and how they see colors.

Edema can occur in other locations as well, but those mentioned above are the most common. It can indicate one of many serious health conditions. It is important to check with a doctor if you are concerned about any kind of swelling.

CLASSIFICATION OF THROMBOSIS:

deep vien thrombosis

portal vien thrombosis

renal vien thrombosis

jugular vien thrombosis

budd-chiery thrombosis

stroke

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