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

**Final term assignment**

**TIME: 6HRS Marks:50**

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**Class ID:… 15744**

**Section:……(A)……………**

**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.

**Ans.** A process of acute inflammation is initiated by resident immune cells is  already present in the involved tissue. Mainly resident macrophages, dendritic cells, histiocytes, Kupffer cells and mast cells.

**Characteristic of acute information.**

A Acute inflammation is characterised by four key features; redness (rubor), heat (calor) swelling (tumour), and pain (dolor) The predominant cell of acute inflammation is the neutrophil.

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

**Ans. Infection.**

An **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. The resulting lesion is referred to as an **infarct** (from the Latin infarctus, "stuffed into").

**Types of infection.**

* Bacterial infections. Bacteria are single-celled microorganisms.
* Parasitic **infections**.
* Viral infections. Viruses are very tiny infectious organisms.
* Fungal infections. Fungi are another diverse group of organisms that can include things like yeasts and molds.
* Prions.

***Mast cells.***

The 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.

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

**Ans. Proliferative capacity.**

A Direct reprogramming of somatic cells to induced pluripotent stem cells (iPSCs) provides an invaluable resource for regenerative medicine. Because of some ethical and logistical barriers, human iPSCs cannot be used to generate a chimera, which is one of markers representing pluripotency. As the most attractive model for preclinical studies, pigs offer another path to improve clinical medicine. In this study, porcine adult stem cells (pASCs), including adipose mesenchymal stem cells (AMSCs) and bone marrow mesenchymal stem cells (BMSCs), were collected and cultured under the same conditions

**Example.**

example of the controlled proliferation of these cells, discussed earlier in this chapter, is the rapid proliferation of skin fibroblasts to repair damage resulting from a cut or wound. Another striking example is provided by liver cells, which normally divide only rarely.

**Characteristic of Benign tumor.**

There are two main classifications of tumors. One is known as benign and the other as malignant. A benign tumor is a tumor that does not invade its surrounding tissue or spread around the body. A malignant tumor is a tumor that may invade its surrounding tissue or spread around the body.

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

**Ans. Hypovolemic shock.**

It is the type of shock in which 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.

**Example.**

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

**Ans. Edema**

The Edema” is the medical term for swelling. Body parts swell from injury or inflammation. It can affect a small area or the entire body. Medications, pregnancy, infections, and many other medical problems can cause edema. Edema happens when your small blood vessels leak fluid into nearby tissues.

**Types**.

1. Pulmonary edema: Excess fluid collects in the lungs, making breathing difficult.
2. Macular edema: This is a serious complication of diabetic retinopathy.
3. Peripheral edema: This affects the feet ankles, legs, hands, and arms.
4. Cerebral edema: This occurs in the brain.

**Thrombosis classification.**

The Thrombosis is a process involving the formation of a clot in the bloodstream and is classified into several different types, according to the location of the thrombus. The two broad classifications are venous thrombosis and arterial thrombosis, depending on whether the clot was developed in an artery or a vein.

**There are 2 main types of thrombosis:**

* Venous thrombosis is when the blood clot blocks a vein. Veins carry blood from the body back into the heart.
* Arterial thrombosis is when the blood clot blocks an artery. Arteries carry oxygen-rich blood away from the heart to the body.