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

**Mid term assignment**

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**Note:**

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

1. Define the following terms with 2 physiological and pathological examples each.

Answer.

1. Atrophy:- Atrophy is the partial or complete wasting away of a part of the body causes. Causes of atrophy include mutations, poor nourishment, poor circulation, loss of nerve supply to the target organ. Atrophy is reduction in size of cell,organ or tissue after attaining its normal mature growth.
2. Hypertrophy:- Hypertrophy is the increase in the volume of an organ pr tissue due to the enlargement of its component cells.
3. Hyperplasia:- Hyperplasia is an increase in the amount of organic tissue that results from cell proliferation It may lead to the gross enlargement of organ
4. Metaplasia:- metaplasia is the transformation of one differentiated cell type from one type to another may be part of normal maturation process or caused by some sort some sort of abnormal stimulus.
5. How does the calcium ions influx affects the cell?write it in your own words.

Answer. When a calcium ions influx the brain cells are overwelmed by them . These calcium ions move in and out of nurons through pore like structures known as channels that are located in the outer surface or skin of the cell.

1. What is free radical?What is the effect of Reactive Oxygen Specie(ROS) on the cell?

Answer. Free radical:- Free radicals are molecules wuth odd number of electrons and a high instability in addition. A wide variety pf environmental agents including the aging process cause free radical damage to cells.

Effect of reactive oxygen specie (Ros):- In addition to energy reactive oxygen species(Ros) with the potential to cause cellular damage are produced. Ros can damage lipid,DNA,RNA and protein. Ros are produced as a normal product of cellular metabolism.

1. Write down some differences between Apoptosis and Necrosis.

Apoptosis is a form of cell death that is generally triggered by normal,healthy processes in the body, necrosis is cell death that is triggered by external factors or disease such as trauma or infection. As a usually healthy form of cells life cycle, apoptosis rarely demands any form of medical treatment but untreated necrosis can lead to serious injury or even death.

1. Write a note on Air Embolism.

Air embolism:- Air Embolism also known as a gas embolism is a blood vessel blockage caused by one or more bubbles of air or other gas in circulatory system. Air embolisms may also occur in the xylem of vascular plants especially when suffering from water stress.