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.**

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

A. Atrophy:-

Atrophy is a decrease in cell size or shrinkage in the size of the cell by the loss of cell substances is known as atrophy.

Physiologic :-

(loss of hormone stimulation in menopause due to decrease level of estrogen hormones and then shut down the reproductive system).

Pathologic:-

Example of pathologic is Denervation.

B. Hypertrophy:-

Hypertrophy is an increase in cell size or organ or tissue due to increase in the size of the cell.

PHYSIOLOGIC:-

Example of hypertrophy is skeletal muscles.

PATHOLOGIC:-

An example of pathologic hypertrophy is in cardiac muscle as a result of hypertension.

C. Hyperplasia:-

Hyperplasia is an increase in the number of cells which result increase the size of an organ is known as hyperplasia.

PHYSIOLOGIC:-

Increase in the size of the breasts during pregnancy.

PATHOLOGIC:-

Occurs due to an abnormal stressor.

D. ***Metaplasia:-***

Abnormal change in the nature of a tissue.

PHYSIOLOGIC:-

Example of metaplasia is is the squasmous metaplasia that occure in the uterine cervix during the menstrual cycle as the squamocolumnar junctions migrates across the transformation zone.

PATHOLOGIC:-

Example f pathological irritation is cigarette smoking.

2. How does the calcium ions influx affects the cell?write it in your own words.

THE CALCIUM IONS INFLUX EFFECTS THE CELL:-

Influx of Ca2+ into human erythrocytes occurs by a facilliated diffusion process, which can be inhibited by phenothiazines and the cinchona alkaloids. Calcium effects many membrane functions including cation permeability, lipid composition interactions which may determine cell shape.

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

FREE REDICALS:-

A free redical are capable of reversible or irreversibly damaging compounds of all biochemical classes, includind nucleic acids, proteins and free amino acids, lipids and lipoproteins, carbohydrates, and connective tissie macromolecules.

Effect of reactive oxygen:-

In addition to energy, reactive oxygen species (ROS) with the potential to cause cellular damaged are produced . ROS can damage lipid,DNA, RNA, and proteins, which in theory , contributes to the physiology of aging.ROS are produced as a normal product of cellular metabolism.

4. Write down some differences between Apoptosis and Necrosis.

APOPTOSIS:-

Apoptosis , or programmed cell death, is a form of cell death that is generally triggered by normal, healthy processes in the body.

NECROSIS:-

Necrosis is the premature death cells and living tissue . caused by a factors pf external to the cell or tissue, such as infection, toxins or trauma.

5. **Write a note on Air Embolism.**

AIR EMBOLISM:-

An air embolism, called a gas embolism.

Air bubbles with in the circulation can obstruct vascular flow and cause distal ischemic injury . Air embolism occurs when one or more air bubbles enter a vein or artery and block it. When an air bubbles enter a vein, its called a venous air embolism. When an air bubbles enters an artery ,its called an arterial air embolism

SOURCE:-

Exogenic; transfusion or trauma in the neck or chest.

RESULTS:-

. Small amount of gas may be absorbed.

. occupies the heart ventricles interrupted the heart flow cause death.

GOOD LUCK