

HUMAN ANATOMY AND PHYSIOLOGY-I, BP-101(T)

UNIT-III (Body fluids and blood)

CLASS:5

TOPIC – Disorders of blood, Reticulo endothelial system.

- Disorders of the blood include a wide range of conditions that affect the production, function, or destruction of blood cells and blood components.

Some common blood disorders include:

1. **Anaemia:** a condition in which the body does not have enough red blood cells or haemoglobin to carry oxygen to the tissues
2. **Haemophilia:** a genetic disorder that affects the body's ability to produce clotting factors, leading to excessive bleeding and bruising
3. **Thrombocytopenia:** a condition in which there are too few platelets in the blood, leading to abnormal bleeding and bruising
4. **Leukaemia:** a type of cancer that affects the blood and bone marrow, leading to abnormal production of white blood cells
5. **Sickle cell disease:** a genetic disorder that affects the shape of red blood cells, leading to pain, organ damage, and other complications

Treatment of blood disorders depends on the specific condition and may include medications, blood transfusions, bone marrow transplants, or other therapies.

RETICULOENDOTHELIAL SYSTEM

The reticuloendothelial system (RES), also known as the mononuclear phagocyte system (MPS), is a network of cells and tissues in the body that play a critical role in the immune system and in the clearance of foreign substances and cellular debris from the blood and tissues.

The RES consists of several types of cells, including macrophages, monocytes, dendritic cells, and certain types of white blood cells. These cells are located primarily in the spleen, liver, lymph nodes, and bone marrow, and they work together to identify and remove foreign particles and cellular debris from the bloodstream.

The main functions of the RES include:

Phagocytosis: The cells of the RES are capable of engulfing and digesting foreign particles such as bacteria, viruses, and other pathogens that have entered the body.

Clearance of waste products: The RES also plays a role in removing cellular debris and metabolic waste products from the blood.

Antigen presentation: The cells of the RES are capable of presenting antigens to other cells of the immune system, which helps to initiate and coordinate immune responses.

Iron recycling: The RES is responsible for recycling iron from old or damaged red blood cells and returning it to the bloodstream for reuse.

Disorders of the RES can lead to a range of health problems, including immunodeficiency, autoimmune diseases, and certain types of cancer. For example, dysfunction of the RES can contribute to the development of chronic inflammatory diseases such as rheumatoid arthritis and lupus. In some cases, drugs that target the cells of the RES, such as macrophages, may be used as a therapeutic approach for these conditions.

IMPORTANT QUESTIONS:

2M QUESTIONS:

1. Define blood.
2. Classify blood groups.
3. What is haemoglobin.
4. Define Artery and Vein.
5. Define: 1. blood Pressure 2. Hematopoiesis 3. Erythropoiesis 4. Anaemia.
6. Explain blood transfusion.
7. Explain reticulo-Endothelial System.
8. Define blood coagulation and enlist its pathways.
9. What is lymph.

5M QUESTIONS:

- 1) Write about coagulation of blood.
- 2) Explain the process of haemoglobin formation in brief.
- 3) Write about composition and functions of blood.
- 4) Write a note on anemia with its types.
- 5) Write an explanatory note on lymphatic system.
- 6) Discuss about ABO blood group system.

10M QUESTIONS:

- 1) Write about coagulation of blood.
- 2) Write about composition and functions of blood.
- 3) Write an explanatory note on lymphatic system.
- 4) Discuss about ABO blood group system.

RCP