

## Mid-Term Assignment

Course Title: hematology

Instructor: Adnan Ahmad

C. Thrombocytopenia

D. Leukopenia

**ID 15875 (SECTION A)**

**MUHAMMAD OWAIS**

### Section A

- the most commonly ordered blood tests
  - Urine RE
  - T3
  - T4
  - Hmgld**
  - None of them
- When a person has been diagnosed with a disease known to affect blood cells, a \_\_\_ will often be ordered on a regular basis to monitor their condition
  - Urine RE
  - T3
  - T4
  - Hmgld
  - None of them**
- The cells that are part of the body's defense system against infections and cancer and also play a role in allergies and inflammation
  - Neutrophils
  - Lymphocytes**
  - Eosinophils
  - Monocytes
  - All of the above
- Normal RBC range in:Male:
  - 4.7 to 6.7 million cells p (cells/mcl)**
  - 4.2 to 5.4 million cells/mcL
  - 6.7 to 6.1 million cells p (cells/mcL)
  - 9.7 to 6.1 million cells p (cells/mcL)
- Low platelet concentration is
  - Thrombocytopenia**
  - Thrombocytosis
- Also known as myeloid tissue
  - Red BM**
  - Yellow BM
  - White BM
  - Greenish fatty tissue
- All red blood cells and platelets in humans adults are formed in \_\_\_\_\_
  - Yellow BM
  - White BM
  - Greenish fatty tissue
  - Myeloid tissue**
- Increase in red blood cells
  - Anemia
  - Polycythemia**
  - leukemia
  - Clotting defects
- Thrombopoietin is a glycoprotein hormone produced mainly by\_\_\_\_
  - Liver
  - Kidney
  - Both a and b**
  - Brain
- life span of RBCs is\_\_\_\_\_
  - 2 months**
  - 3 months
  - 6 months
  - None of them

## Section B

### **Q:1 Enlist characteristics of blood.**

(ANS).

Following are the characteristics blood.

- 1 Blood is fluid connective tissue.
- 2 Blood transport nutrient and harmones.
- 3 Blood regulate body temperature.
- 4 Platelets clot blood at site of injury.
- 5 Blood bring waste products to the kidney and liver.
- 6 White blood cells product body from pathogens.

### **Q:2 Briefly Explain hematopoiesis.**

(ANS).

#### **DEFINATION:-**

The production of all types of blood cell including formation development and differentiation of blood cells.

#### **OCCURANCE:-**

Haematopoiesis occur in

The yolk salc then in the liver and lastly in the bone marrow.

#### **PROCESS:-**

Haemotopoietic stem cell reside in the medulla of the bone marrow and have unique ability to give rise to all of the different mature blood cell tissue HSCs are self renewing cells.

The phenomena is called asymmetric division.

#### **CELL TYPE:-**

RBC also called erythrocytes are the oxygen carrying. It is functional and released in to the blood.

#### **LYMPHOCYTES:-**

Lymphocytes are the corner stone of the adaptive immune system. Ther are derived from commom lymphoid progenitors.

**HEMATOPOIESIS IN FETUS:-**

Embryonic hematopoiesis begin in yolk sack and change to definitive hematopoiesis in the fetal liver.

**OCCURANCE:-**

It occur in the red marrow of the bone with age.Hematopoeisis become restricted to the skull sternum ribs vertebrae and pelvis.

**HEMATOPOEISIS IN INFANTS:-**

Sometime called primitive hematopoiesis.

hematopoeisis in the embryo produce only red blood cell that can provide developing organ with oxygen.In adults hematopoisiss of red blood cell and platelets occur in primirly in the bone marrow.

In infants and children it may also continue in the spleen and liver.

**HEMATOPOEISIS IN ADULTS ;-**

In adults in hematopoeisis of fed blood cell and platelets occur in the bone marrow.

**Q:3 write down a comprehensive note on bone merrow.**

(ANS)

**BONE MARROW:-**

\_\_\_\_\_ Bone marrow is the spongy tissue inside some of our bones such as hip and thifg bones. It contains stem cells. The stem cell can develop into the red blood cell that carry oxygen through our body.

**BONE MARROW DISESE:-**

In leukemia a cancer of the bp;ood the bone marrow makes abnormal white blood cells.

Inplastic anemia the bone marrow doesn't make red blood cell.

Other disease such as lumphoma can spred into the bone marrow an effect the production of red bl;ood cell.

**Q:4 Describe different sites of hematopoiesis in fetus, infants and adults.**

(ANS)

Tissue in the spleen liver lymph nodes and some other organs produce another type of white blood cells called monocytes.