**Mid-Term Assignment**

**Course Title: hematology**

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**Section A**

 ( red marking are answes of MCQS tanks)

* the most commonly ordered blood tests
* Urine RE
* T3
* T4
* HMGLBN
* 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
* Hmglb
* 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 6.1 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
* Thrombocytopathy
* Leukopenia
* 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.

**Q:2** Briefly Explain hematopoiesis.

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

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

 ( SECTION >>B)

QNO>01..Enalist charchtristics of blood ..?

 ANS..followinf are the charichtristic of blood.

01.blood is fluid connective tissue

02.blood transfer nuterient and harmone .

03.blood regulate body temprature.

04.platlates clot blood it site of injury.

05.blood bring waste product to the kidney and liver.

06.white blood cell protect body from pathogene.

 ( SECTION..B)

QNO2...briefly explain hematopoiesis?

ans.....definition.the production of all types of blood cell including formation develpment and deffrentiation of blood cell .

occurance...hematopoiesis occure in the yolk sac then in the liver and lastly in the bone marrow process..bone marrow is the spongy tissue inside some of our bone such as hip and high bone . it contain stem cell the stem cell can devolope into the red blood cell that carry oxygen throug our body hematopeotic stem cell riside in the medulla of the bone maroow and have unique ability to give rise to al of the different mature blood cell and tissue

 HBCs are self renwevinf cell this phonomena is called assymetric division

CELL TYPE..RBC are aloso called erthrocytes or the oxygen carring it is functional and released into thr blood

LYPHOCYTES..lyphocytes are the corner stone of the adaptive immune system they are derived from a coomn lyphoyed progenator .

 ( SECTION>>B)

QNO03....WRITE DOWN a comprehensive note on BONE MArrow??

ANS>>bone marow is the spongy tissue inside some of our bone such is hip thigh bones it contain stem cell the stem cell can devlope into the red blood cell that carry oxygen through our body ....

2.BONE MARROW DISEASES...in leukimia a cancer of the blood the bone marrow makes abnormal white blood cell .

in aplastic anemia the bone marrow doesnot make red blood cell

other diseases such as lumphoma can soread into the bone maroow and can effect yhe production of red blood cell

there are tow types of bone marrow

01.RED BONE MARROW....red bone marrow produce all red blood cell and platlates in human adult an daround 60 to 70 percent of lyphocytes .other lyphocytes begin life in the red bone marrow and become fully formed the lymphetic tissu including yhe thymus, spleen, and lymph node .together with the liver and spleen red bone marroe also plays a role in getting red of old red blood cell.

02YALLOWBONE MARROW ..yallow bone marrow mainly is a store for fats .its help to provide sustannce and maintain the correct invioronment for the bone to funnction hower under particuler condition such as sever blood loss or fever the yallow marrow may revert to red marrow

FUNCTION..blood cell formation from diffritaion of hematopjoetic stem cell in red bone marrow .most red blood cell and platletes and most of the white blood cell are formed in the red marrow .yalow bone marrow produce fat cartilage and bone

 ( (SECTION B)

QNO04...describe different sites of hematopoiesis in fetus , infant and adult

ANS...>hematopoiesis begain in the yolk sac and chnage to difinative hematopoesis in the fetal liver

OCCURENCE...its occure in the red marrow of the bone with age hematopesis become restrictad to the skull sternum ribs vertibrea and pelvis

HEMATOPOIESIS IN INFANT ...sometime called promitive hwmatoposis

hematoposis in the embroy produce only red blood cell that can provide devlelping organ with oxygen .. in adult hematoposis of red blood cell and platlets occure primry in the bine marrow ,

in infants and childern it may aslo continue in the spleen and liver

HEMATOPOSIS IN ADULT....in adult hematoposis of red blood cell and platlets occure primirly in the bone marrow

tissu in the spleen and liver lympj node and some other organ produce another type of white bolld cell called mionocytes,,,,

 THE END

ematophoiesis occure in the yolk sac than in the liver and lastly in the bone marrow