**Mid-Term Assignment**

**Course Title: hematology**

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**Section A**

1. the most commonly ordered blood tests
2. Urine RE
3. T3
4. T4
5. Hmglb
6. None of them
7. 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
8. Urine RE
9. T3
10. T4
11. Hmglb
12. None of them
13. The cells that are part of the body's defense system against infections and cancer and also play a role in allergies and inflammation
14. Neutrophils
15. Lymphocytes
16. Eosinophils
17. Monocytes
18. All of the above
19. Normal RBC range in:Male:
20. 4.7 to 6.1 million cells p (cells/mcL)
21. 4.2 to 5.4 million cells/mcL
22. 6.7 to 6.1 million cells p (cells/mcL)
23. 9.7 to 6.1 million cells p (cells/mcL)
24. Low platelet concentration is
25. Thrombocytopenia
26. Thrombocytosis
27. Thrombocytopathy
28. Leukopenia
29. Also known as myeloid tissue
30. Red BM
31. Yellow BM
32. White BM
33. Greenish fatty tissue
34. All red blood cells and platelets in humans adults are formed in\_\_\_\_\_\_\_\_\_\_\_\_
35. Yellow BM
36. White BM
37. Greenish fatty tissue
38. Myeloid tissue
39. Increase in red blood cells
40. Anemia
41. Polycythemia
42. leukemia
43. Clotting defects
44. Thrombopoietin is a glycoprotein hormone produced mainly by\_\_\_
45. Liver
46. Kidney
47. Both a and b
48. Brain
49. life span of RBCs is\_\_\_\_\_
50. 2 months
51. 3 months
52. 6 months
53. None of them

**Section B**

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

Answer;The red liquid that circulates in the arteries and veins of human. blood is a connective tissue-

Components of blood ; our blood is composed of plasma and three types of cell; red blood cell, white blood cell, and platelets.

-by volume the erythrocytes (RBCs) constitute about 45% of over all blood. The blood plasma is about 54.3%. and leukocytes (thrombocytes) made up less then 1%.

-Function of Blood ; the main function of blood is transport , gases, nutrients, waste product, processed molecules. It regulate the PH and osmosis. also maintane the body temperature .protect the body against microrganisam.clot formation

. Blood volume. Blood is generally accounts for 8% of the human body weight.

**Q:2** Briefly Explain hematopoiesis.

Answer;hematopoiesis is the formation of blood or blood cells in human body. Hematopoiesis is the production of over all cellular components of blood and blood plasma. It take place in hematopoiesis system. Which involves organs and tissue such as the bone marrow liver, and spleen.

-it startin the developmentof an embryo. Well before child birth, and continues through out life.

-start in the first week of embryonic development . all blood cell and plasma develop from a stem cell. The blood is made up of more than 10 different cell types.

That are divided into three main categories

(1)Red Blood cell (erthrocytes) these transport oxygen and hemoglobin throughout life.

(2)White Blood cell (leukocytes) it support the immune system. There are many types of WBCs cells.

(a)Lymphoctes (b) Neutrophills (c) Eosinophills (d) Basophills

(3)platelets (thrombocytes) these help blood to clot.

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

Answer;Bone marrow is the spongy, red tissue that fills the bone cavities of mammals. Bone marrow is the source of red blood cell, platelets, and most white blood cells.

Introduction to bone marrow

human marrow produce approximately 500 billion blood cell per day. Which join the system circulation .

Two types of bone marrow (1)Red marrow and yellow marrow. In these type marrow all red blood cell platelets in humans are found.

-Red bone marrow also known as myeloid tissue.

(2)Yellow bone has a much a which higher amount of fat cell then red marrow.

The yellow bone marrow’s main function is act as a store for fats and helping to provide substance and maintain correct enviroment for bone to function.

-Also known is fatty tissue.

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

Answer; There are three site of hematopoiesis

(1) Fetus

(2) Infants

(3) In adult

(1) Fetus in there 0-2 month it occurs in yolk sac.

2-7 months its occur in liver and spleen

-From 5 to 9 months it occur in bone marrow .

(2) Infants occurs in all bone marrow

(3) Adults its occur in adult in vertebrae, ribs, skull, pelvis, proximal, ends of femur