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Semester 2nd

Section A

Paper HEMATOLOGY

Q2:

**COMON CAUSE OF A POOR BLOOD SMEAR:**

1]DROP of blood to large or to small

2]spreader slides pushed across the slide in a jerky manner

3]failure in keep the entire edge of the spreader slide against the slide while making the smear

4]failure in keep the spreader slide at a 30 degree angel with ]the slide

5] Holes is film slide contaminated with a fat or grease and air bubbles

6] irregular spread with ridges and long tail edge of spreader .

Q4 ]

**IRON DEFICIENCY**

1]iron deficiency can range from sub clinical state to serve iron deficiency anemia

2]Anemia is defined as a haemoglobin below the 5th percentile of health population

3] most studies showed this cutoff point to be arount 11 g /dl 2sd below the mean

4] Iron deficiency is most common microminute deficiency in the world effecting 1.3 million people 24 f the world poulation

5] IN comparison only 275 million are indine deficient are 45 million children below age 5 yera are vitamin A deficient

**CAUSES OF IRON DEFICIENCY ANEMIA**

. chronic blood loss

. utreine

. GAStrointestine peptic ulcer oesophageal varices aspirin or other non steroidal anti inflammatory drug ingestion partial gastrectomy carcinoma of the stomach colon or rectum hookworm angiodysplasia colitis piles diverticulosis rarely haematuria haemoglobin pulmonary haemosiderosis self inflicted blood loss.

Q1]

**ERYTHROROPOIESIS**

.IN normal state the balance of production and destruction is maintained at remarkably constant rate.

. THE earliest recognizable erythoid precuros seen in the bone marrow is large basophilic staining call 15 20 um.

. CONTAIN a single large well defined rounded uncleus ribosomes mitochondria and golgi apparatus.

.AS the early precursor cell mature its nucleus increase in size as maturation goes on cell become smaller and more eosinophilic indi cating haemoglobin.

 .During intermediate stage of maturation cytoplasm because polychromatic indicating mixture of basophilic proteins and eosinophilic.

.FURTHER MATURATION HEMOGLOBIN synthesis continue and cytoplasm because entirely eosinophillic.

. LATE STAGES OF MATURATION , haemoglobin is abundant few mitrochondria and ribosome are present nucleus i s small dense and well circumscribed.

**Q5] ANEMIA**

ANS

ANEMIA is classified by morphology or pathophysiology . the morphological classification is based partly on the size are volume of the blood cell .

 Microcytic indicate an abnormally small cell and marcocytic indicate an abnormally large cell.

CLASSFICATION OF ANEMIA MORPHOLOGIC

MICROCYTIC ANEMIAS

.iron deficiency

.thalassemia

.sideroblastic anemia

. anemia of chronic disease sever cases

NORMOCYTIC ANEMIA

.ANEMIA if chroin disease [most cases]

.anemia of renal disease

.combined nutritional deficiency[ iron folate or cobalamine]

.. marro failure

. hypothyroidism

MACROCYTIC ANEMIA

. MARALOBLASTIC anemia [ folate or cobalamine deficiency]

.liver disease

. hypothyroidism

.myelodysplasia.

Q3]

GRANULOPOIESIS

Granulopoiesis or granulocytopoiesis is a part of haematopoiesis that leads to the production of granulocytes.

 It leades to the production of three types of mature granulocytes neutrophills most abundant making up to 60% of all white blood cell ] eosinophils up to4% and basophils yp to 1%.

STGAGE OF GRANULOCYTE DEVELOPMENT

Granulopoiesis is often divided into two type granulocyte linage determination involving the early maturation steps that are common for all myeloid cell and committed granulopoiesis the irreversible commitment of a myeloid cell to become a granulocyte.

TYPES OF GRANULOPOIESIS

1] stesdy state granulopoiesis

2]emergency granulopoiesis.

 THE END