TECHNICAL UNIVERSITY OF MOMBASA

FACULTY OF APPLIED AND HEALTH SCIENCES

DEPARTMENT OF MEDICAL SCIENCES

UNIVERSITY EXAMINATION FOR:

BMLS

AML 4305: HAEMATOLOGY II

SPECIAL/ SUPPLIMENTARY EXAMINATIONS

SERIES: September 2018

TIME:2HOURS

DATE: Pick DateSep2018

Instructions to Candidates

You should have the following for this examination

-Answer Booklet, examination pass and student ID

This paper consists of **TWO**Section(s). AttemptALL questions.

Circle the correct answer in section A.

Section A

1.Which of the following statements is true about β-thalassaemia major?

A. The major cause of death is liver failure

B .It requires iron chelation at diagnosis

C. It is usually caused by deletion of β globin genes

D. It may be diagnosed antenatally

E.MCV is increased

2.Which of the following is not a disorder of Red cell

A.Spherocytosis
B.Polycythamia
C.Mylematosis
D.Anaemia
E.Thalassamia

3Which of the following is a RBC disorder?

A. Thrombocytopenia
B .Anaemia
C Leukaemia
D. Thrombosis
E Haematopoesis

4. Which of the following is true concerning the haemopoietic stem cell?

A It is thought to be homogeneous

B. It represents approximately 1% of bone marrow cells

C It resembles does not resemble any other cell types
D It is uneffectively transferred during stem cell transplantation
E Its a self renewing progenitor cell

5 Which of the following is not a component of Hb?
A Proteins
B Iron atoms
C Protoporphyrin
D bilirubin
E.2,3diphosphoglycerate

6 Which of the following is true about folic acid daily requirement?

A. 4mg
B. 400mcg
C. 0.4
D. 300mcg
E.5mg

7.Aplastic anaemia is characterized by the following except

A.Leucopenia
B. Leucocytosis
C. Pancytopenia
D. Thrombocytopenia
E.Anaemia

8. Circulating IgG antibodies of maternal origin is a manifestations of which condition.
AHaemolytic Disease of Newborn
B. Anemia
C. Thallasamia
D. Acute mylegenous leukamia
E. Hepatosplenomegaly

9.The following criteria can differentiate acute myelogenous leukemia from and acute lymphocytic leukamia sy Except:
A. Coombs test
B. Presence or absence of blasts in the peripheral blood
C. Cytogenic analysis
D. Cytochemical staining
E. Immunophenotyping
10..Which of the following is the cause of megaloblastic anaemia
A Iron deficiency

BAcute Blood loss
C Aplasia
DLiver disease
E Alcoholism

11. Which of these statements is true about Hodgkins lymphoma?
A It presents at birth
B It is diagnosed by identifying RS cells in stained lymph node tissue
C It is associated with splenomegaly
D It is associated with an increased risk of bone infarction
E.It is endemic

12.Which of the following statements is true concerning sickle cell trait?
A It is a cause of anaemia
B It protects against malaria
C It occurs mainly in females
DIts not hereditary
E It's a disease

13 Which of the following is not true about sickle cell anaemia?
A The oxygen dissociation curve is shifted to the right
B It is associated with stunted growth
C It may cause ankle ulcers
D It is associated with stroke
E It is associated with atrophy of the spleen

14.The following may cause abnormal bleeding except?
A damage to vascular endothelial damage
B reduction in platelate numbers
C folate deficiency
D defective platelate function
E disorders of blood coagulation

15.Which of the following statements regarding oral iron therapy is true?
A Slow-release preparations are indicated for patients with gastrointestinal disorders
B Treatment should be given with vitamin C
C The maximum dose is 200 mg ferrous sulphate three times daily
D It is best given at night
E It is routinely indicated in pregnancy

16 Which of the following is caused by folate deficiency?

A Spinal cord damage
B Neural tube defect

C Haemolytic anaemia
D Duodenal atrophy
EMicrocytic anaemia

17.Which of these most accurately describes the physiological changes within blood that occur during normal pregnancy?
A Blood plasma volume increases by 25% and red cell mass increases by 25%
B Blood plasma volume increases by 45% and red cell mass increases by 25%
C Blood plasma volume increases by 25% and red cell mass increases by 45%
D Blood plasma volume increases by 45% and red cell mass increases by 45%
ENone of the above

18 Which of these is true concerning folate deficiency during pregnancy?

A Folate fortificaion of food is usually associated with a reduction in the incidence of neural tube defects
B Folate requirements are stable during pregnancy but absorption is decreased
C Folic acid at a dose of 5 mg/day is recommended for all women in the periconceptual period
D Serum folate levels during pregnancy are the same as those in non-pregnant. Individuals
ENone of the above

19.Which of these is the most likely diagnosis for a case where the reticulocyte count is raised and the direct antiglobulin test (DAT) is positive?
A Fetomaternal bleed
B α-Thalassaemia
C Parvovirus B19
D Haemolytic disease of the newborn
E Anaemia

20 Which of these is not a recognized clinical feature of haemolytic disease of the newborn?
A Intrauterine death from hydrops fetalis
B Baby is born with pallor and hepatosplenomegaly
C Jaundice
D Polycythaemia in the cord blood
E None of Above

21Which of these statements is not true concerning von Willebrand disease?
A There is either a reduced level or abnormal function of von Willebrand factor (vWF)
B Factor VIII levels may be reduced as vWF is the carrier for factor VIII protein
C It is the most common inherited bleeding disorder and inheritance is usually autosomal dominant
D Plasma derived factor VIII concentrates contain vWF and are the treatment of choice in most cases
E All are true

22Which of the following statements is true concerning intrinsic factor system?

A Involves factor XII and kallikrein
B It is required to cleave fibrin from its precursor form
C Breastfed babies are at risk of haemorrhagic disease of the newborn
D The intrinsic factor invivo begins with activation by factor I and II
E Vitamin K deficiency affects the Intrinsic pathw
ay

23 Which of the following is not cause of acquired coagulation?

A Vitamin K deficiency
B Disseminated Intravascular disease
C Haemophillia A
D.Snake bite D Snake bite
E haemorrhagic disease of newborn

24.Which of the following is not true about acute myeloid leukaemia?
A It may cause pancytopenia
B Most common in children
C Most common in adullts
D It may follow myelodysplasia
E It may cause swelling of the gums

25. Which of these is the most likely blood count in a patient who presents with acute myeloid leukaemia?
A Hb 14 g/dL; white blood cell count (WBC) 270.10^9/L; platelets 100.10^9/L
B Hb 9 g/dL; WBC 2.10^9/L; platelets 140.10^9/L
C.Hb 9 g/dL; WBC 27.10^9/L; platelets 10.10^9/L
D Hb 14 g/dL; WBC 270.10^9/L; platelets 1000.10^9/L
E Hb 9,WBC 270,platelates 140

26 Which of the following is a favourable feature of chronic lymphocytic leukaemia?
A Young age
B Male sex
C Somatic mutation of immunoglobulin heavy-chain gene
D Increased expression of p53
E Rapid doubling time of blood lymphocytic count

27. Which disease is most accurately described by this statement. 'There is bleeding into mucous membranes, the platelet count is normal, factor VIII level may be moderately reduced and the partial thromboplastin time (PTT) may be normal or prolonged.'
A Haemophilia A
B Haemophilia B
C Von Willebrand disease
D Immune thrombocytopenic purpura

E Leukamia

28.Which of these statements is not true concerning von Willebrand disease?
A There is either a reduced level or abnormal function of von Willebrand factor (vWF)
B Factor VIII levels may be reduced as vWF is the carrier for factor VIII protein
C It is the most common inherited bleeding disorder and inheritance is usually autosomal dominant
D Plasma derived factor VIII concentrates contain vWF and are the treatment of choice in most cases
E All of the above

29.Which of these is believed to be true regarding acute lymphoblastic leukaemia (ALL)?
A There is an increased incidence of ALL in children who attend nursery care early in life
B Almost all children who develop the TEL-AML1 translocation go on to develop clinical ALL
C There is no increased familial incidence
D The first mutation is thought to occur *in utero* in most cases of ALL
ENone of the above

30.Which of the following equipment can we use to count cells manually

A.Haemocytometer
B Elecrophoresis
C Photometric
D Platelate counter
E RBC counter

Section B
31a Define myelomatosis and its features .(10 mrks)

b Describe Aplastic Anaemia.(10 marks)

32.Discuss Intrinsic and extrinsic pathway in coagulation (20mkrs)