

CHUKA



UNIVERSITY

UNIVERSITY EXAMINATIONS

SECOND YEAR EXAMINATION FOR THE AWARD OF
BACHELOR OF SCIENCE NURSING

NURS 222: HEMATOLOGY

STREAMS: BSC (NURSING) Y2S1

TIME: 3 HOURS

DAY/DATE: MONDAY 03/12/2018

2.30 PM – 4.30 PM

INSTRUCTIONS:

- Answer ALL questions
- Answers for section A should be on the first page of the answer booklet
- Do not write anything on the question paper
- This is a **closed book exam**, No reference materials are allowed in the examination room
- There will be **No** use of mobile phones or any other unauthorized materials
- Write your answers legibly and use your time wisely

SECTION A

1. A client and the husband are positive for the sickle cell trait. The client asks the nurse about the chances of her children having sickle cell disease. The nurse understands this genetic problem will reflect what pattern in the client's children?
 - a. One of her children will have sickle cell disease
 - b. Only the male children will be affected
 - c. Each pregnancy carries 25% chance of the child being affected
 - d. If she had four children, one of them will have the disease
2. A child with leukemia is being discharge after beginning chemotherapy. What instructions will the nurse include in the teaching plan for the parents of this child?
 - a. Provide a diet low in proteins and high in carbohydrates
 - b. Avoid fresh vegetables that are not cooked or peeled
 - c. Notify the clinician if the child's temperature exceeds 39°C
 - d. Increase the use of humidifiers in the house
3. The nurse is assessing a client who has been given the diagnosis of polycythemia vera. What characteristics will the nurse anticipate finding when assessing the client?
 - a. Increased fatigue and bleeding tendencies

- b. Hemoglobin below 13g/dl
 - c. Headaches, dyspnea and claudication
 - d. Back pain, ecchymosis and joint tenderness
4. The parents of a client with hemophilia are taking their child home. Which statement indicates a need for further education regarding hemophilia?
- a. "we should ensure our child has regular dental check-ups"
 - b. "we need to wrap our child's limbs daily to prevent bleeding"
 - c. "we should help our child select activities that minimize the risk of injury"
 - d. "we should not give our child aspirin"
5. All the following are suggestive of iron deficiency anemia EXCEPT
- A. koilonychia
 - B. pica
 - C. decreased serum ferritin
 - D. decreased total iron-binding capacity (TIBC)
6. Which of the following statements is true?
- A. Factor VIII deficiency is characterized clinically by bleeding into soft tissues, muscles, and weight bearing joints.
 - B. Congenital factor VIII deficiency is inherited in an autosomal recessive fashion.
 - C. Factor VIII deficiency results in prolongation of the prothrombin time.
 - D. Factor VIII complexes with Hageman factor, allowing for a longer half-life.
7. Which of the following statements correctly describes characteristics of stem cells?
- A. Ability to differentiate into a variety of mature cell types
 - B. Capacity for self-renewal
 - C. Generate, maintain, and repair tissue
 - D. A and C
8. Aplastic anemia has been associated with all of the following EXCEPT
- a. carbamazepine therapy
 - b. methimazole therapy
 - c. non-steroidal inflammatory drugs
 - d. parvovirus infection
7. Which of the following is an appropriate intervention for a patient with sickle cell disease experiencing priapism that has lasted four hours?
- a. Administration of opioid analgesics
 - b. Application of ice packs to the penis
 - c. Intravenous heparin boluses
 - d. Restriction of fluid intake
8. Which of the following is characteristic of pernicious anemia?
- a. increased production of intrinsic factor
 - b. decreased absorption of vitamin B₁₂
 - c. antibodies to gastric HCl

- d. decreased absorption of folate
9. Which of the following deficiencies would most likely lead to megaloblastic anemia?
- a. vitamin E deficiency
 - b. vitamin B₆ deficiency
 - c. iron deficiency
 - d. folic acid deficiency
10. The peripheral blood of a patient with iron deficiency anemia will most likely show what picture?
- a. microcytic, hypochromic red cells
 - b. microcytic, normochromic red cells
 - c. macrocytic, hypochromic red cells
 - d. normocytic, hypochromic red cells
11. With increased intravascular hemolysis which of the following will likely occur?
- a. the test for methemalbumin will be negative
 - b. urine hemosiderin will be increased
 - c. unconjugated bilirubin levels will remain normal
 - d. the reticulocyte count will decrease
12. A patient has anemia, decreased RBC indices, and targets on the peripheral smear. Serum iron is normal and electrophoresis shows increased HbF and HbA₂. What is a possible diagnosis?
- a. alpha thalassemia
 - b. sideroblastic anemia
 - c. beta thalassemia
 - d. anemia of chronic disease
13. The anemia of chronic disease may be caused by which of the following:
- a. impaired iron metabolism
 - b. autoantibodies
 - c. increased EPO secretion
 - d. increased RBC lifespan
14. All of the following describe multiple myeloma, EXCEPT:
- a. malignant plasma cells infiltrate the bone marrow
 - b. hypercalcemia
 - c. low levels of plasma immunoglobulin
 - d. light chains are excreted in the urine
15. Why is there decreased production of blood cells in the marrow in acute leukemia?
- a. There is a stem cell defect
 - b. There is a growth factor deficiency
 - c. There is an erythropoietin deficiency
 - d. The malignant cells replace normal marrow

16. Which of the following coagulation factors does Antithrombin III inhibit?
 - a. Factor V
 - b. Factor VIII
 - c. Factor IX
 - d. Factor XIII

17. Which of the following test results would most likely be seen in Hemophilia A?
 - a. an abnormal PT
 - b. an abnormal Bleeding Time
 - c. abnormal von Willebrand factor levels
 - d. an abnormal APTT

18. Which of the following tests would be normal in von Willebrand disease?
 - a. a factor VIII:C assay
 - b. von Willebrand factor multimer analysis
 - c. tests for platelet aggregation
 - d. thrombin time

19. Blood cells with high mean cell volume are
 - a. Normocytic
 - b. Microcytic
 - c. Normochromic
 - d. Macrocytic

20. Formed elements of blood are
 - a. erythrocytes, plasma
 - b. plasma, granulocytes
 - c. agranulocytes, erythrocytes
 - d. plasma, agranulocytes

SECTION B (40 marks)

1. Describe the laboratory test that is used to assess the integrity of intrinsic pathway of coagulation. (5 marks)

2. Describe the nursing management of a patient in sickling crisis. (10 marks)

3. State five (5) nursing interventions in the care of a patient with acute myeloblastic leukemia. (5 marks)

4. Describe the observations that you will note in a normal peripheral blood smear. (5 marks)

5. Differentiate between Hodgkin and Non-Hodgkin Lymphomas. (5 marks)

6. State five (5) nursing interventions in a patient with hemophilia. (5 marks)

7. Describe the Pathophysiology of Disseminated Intravascular Coagulation (DIC). (5 marks)

SECTION C (20 marks)

1. During the first antenatal visit one of the routine tests carried out is full haemogram.
- a. Describe the normal parameters of the cellular components of blood (4 marks)
 - b. State five clinical manifestations of iron-deficiency anemia. (5 marks)
 - c. Describe the nursing management in iron-deficiency anemia. (11 marks)
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