

**CHUKA**



**UNIVERSITY**

**UNIVERSITY EXAMINATIONS**

**EXAMINATION FOR THE AWARD OF DEGREE OF  
BACHELOR OF SCIENCE IN NURSING UPGRADING**

**NURU 124: HEMATOLOGY**

**STREAMS: BSC (NURS) UPG YIT3**

**TIME: 2 HOURS**

**DAY/DATE: THURSDAY 17/12/2020**

**8.30 AM – 10.30 AM**

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**INSTRUCTIONS:**

- 1. Do not write anything on the question paper.**
- 2. Mobile phones and any other reference materials are NOT allowed in the examination room.**
- 3. The paper has three sections. Answer ALL questions.**
- 4. All your answers for Section I (MCQs) should be on one page.**
- 5. Number ALL your answers and indicate the order of appearance in the space provided in the cover page of the examination answer booklet.**
- 6. Write your answers legibly and use your time wisely**

**PART I MULTIPLE CHOICE QUESTIONS(20 MARKS)**

1) Which of the following is the earliest site of hematopoiesis in the embryo?

- Bone marrow
- Liver
- Spleen
- Yolk sac

2) Stem cell factor is produced mainly by;

- Stem cells.
- Thymic epithelium.
- Bone marrow stromal cells.
- Megakaryocytes.

3) Positive selection in the thymus is mediated by:

- Thymic epithelial cells.
- Macrophages.
- Dendritic cells.

d) B-cells

4) Which of the following statements is not true?:

- a) Pluripotent hematopoietic stem cells are produced in the bone marrow.
- b) In adults, the thymus is virtually atrophied and is therefore no longer functional.
- c) Thymocytes are educated in the thymus.
- d) Plasma cells are always derived from B-lymphocytes.

5) Which of the following white blood cells is capable of phagocytosis?

- a) Basophil
- b) Eosinophil
- c) Lymphocyte
- d) Neutrophil

6) The hormone erythropoietin stimulates red blood cell production in the red bone marrow.

Where in the body is erythropoietin produced?

- a) Spleen
- b) Kidney
- c) Liver
- d) Thyroid

7) Which of the following statements about erythrocytes is correct?

- a) They fight infection.
- b) They clot blood.
- c) They lack a nucleus.
- d) They are produced in the spleen.

8) Platelets are formed from what type of cell?

- a) Melanocytes
- b) Macrophages
- c) Astrocytes
- d) Megakaryocytes

9) An increased white blood cell count is indicative of which disease?

- a) Lupus
- b) Leukaemia
- c) Anaemia
- d) Melanoma

10) A lack of which of these will result in abnormally large red blood cells and a condition called megaloblastic anemia?

- a) Oxygen
- b) Vitamin C
- c) Vitamin B-12 and folic acid
- d) Carbon dioxide

- 11) Anemia can contribute to which of these among older adults?
- a) More falls
  - b) High blood pressure
  - c) Diminished eyesight
  - d) Diabetes
- 12) What are the common risks of donating blood?
- a) Contract common viruses
  - b) Bacterial infection
  - c) Low blood pressure
  - d) None of the above
- 13) How often can a donor give blood?
- a) At any time
  - b) Every 2 months
  - c) Every 3 months
  - d) Every 6 months
- 14) Which of the following is contained within the alpha granules of platelets?
- a) Serotonin
  - b) Adenosine diphosphate
  - c) Fibrinogen
  - d) Thrombin
- 15) Infection commonly related to Hodgkin's lymphoma is
- a) Epstein-Barr Virus
  - b) Herpes
  - c) H. pylori
  - d) Cytomegalovirus
- 16) Which of the following is not a T-cell disorder?
- a) Mycosis fungoides
  - b) Sezary syndrome
  - c) Burkitt's lymphoma
  - d) Anaplastic large cell lymphoma
- 17) The most common coagulopathy in trauma patients is
- a) Clotting factor inhibition and depletion
  - b) Disseminated intravascular coagulation
  - c) Citrate toxicity
  - d) Hypofibrinogenemia
- 18) Cryoprecipitate contains each of the following clotting factors EXCEPT
- a) Factor VIII
  - b) Factor IX
  - c) Factor XIII

d)Fibrinogen

19)Which of the following statements about Fresh frozen plasma (FFP) is NOT true?

- a)Must be group specific
- b)Does not need to be cross matched
- c) Contains clotting factors except deficient in factors V and VIII
- d)Does not contain albumin

20) During transfusion of platelets a patient develops fever, rigors and vomiting and becomes hypotensive and tachycardic. The most likely diagnosis is

- a)ABO incompatibility
- b)Anaphylaxis
- c)Bacterial contamination of the platelets
- d)Leukocyte mediated transfusion reaction

### **PART II SHORT ANSWER QUESTIONS (30 MARKS)**

1)Describe the mechanisms by which hemostasis is achieved after rupture of a vessel. (6marks)

2)State five characteristics of an ideal anticoagulant. (5marks)

3)Explain three methods used to treat iron overload. (6marks)

4)Outline the nursing management for hemophilia patient. (5marks)

5)Describe the components of a complete blood count. (8marks)

### **PART III LONG ANSWER QUESTION (20 MARKS)**

1)34 year old miss D has been on a long term treatment for anemia and is admitted for blood transfusion

a)Outline six clinical manifestations of anemia. (6marks)

b)Describe the role of the nurse during the transfusion. (11marks)

c)State three transfusion reactions that can occur. (3marks)

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