

Candidate Number:.....



“Investing in Africa’s Future”

**COLLEGE OF HEALTH, AGRICULTURE & NATURAL SCIENCES
DEPARTMENT OF BIOMEDICAL AND LABORATORY SCIENCES**

BACHELOR OF MEDICAL LABORATORY SCIENCES HONOURS

END OF SEMESTER EXAMINATIONS

NSLS406: BLOOD BANK II

MAY 2025

LECTURER: PROFESSOR. EMMANUEL OBEAGU

DURATION: 3 HOURS

INSTRUCTIONS

1. Write your candidate number on the space provided on top of each page
 2. Answer **all** questions in sections A on the question paper.
 3. Answer **all** questions in section B on separate answer sheets provided.
 4. Answer any **3** questions in section C on separate answer sheets provided
 5. Mark allocation for each question is indicated at the end of the question
 6. Credit will be given for logical, systematic and neat presentations in sections B and C
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SECTION A (MULTIPLE CHOICE): 20 MARKS- EACH CORRECTLY ANSWERED QUESTION IS 1 MARK

Instruction: Answer all questions by encircling the correct response T for TRUE or F for FALSE for each statement in all the questions

1. **Which type of hypersensitivity reaction is mediated by IgE?**
 - a) Type I **T or F**
 - b) Type II **T or F**
 - c) Type III **T or F**
 - d) Type IV **T or F**

2. **Which of the following is an example of a Type III hypersensitivity reaction?**
 - a) Asthma **T or F**
 - b) Serum sickness **T or F**
 - c) Contact dermatitis **T or F**
 - d) Anaphylaxis **T or F**

3. **Autoimmune diseases occur due to:**
 - a) Failure of self-tolerance **T or F**
 - b) Bacterial infections **T or F**
 - c) Decreased neutrophils **T or F**
 - d) Overactive complement system **T or F**

4. **Which of the following tests is commonly used for detecting autoantibodies in systemic lupus erythematosus (SLE)?**
 - a) Direct Coombs test **T or F**
 - b) Antinuclear antibody (ANA) test **T or F**
 - c) ELISA for IgE **T or F**
 - d) Hemagglutination assay **T or F**

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5. **Which of the following is a tumour marker for prostate cancer?**
- a) CEA **T or F**
 - b) CA-125 **T or F**
 - c) PSA **T or F**
 - d) AFP **T or F**
6. **Which HLA class is most important in organ transplantation?**
- a) HLA Class I **T or F**
 - b) HLA Class II **T or F**
 - c) HLA Class III **T or F**
 - d) All of the above **T or F**
7. **Hyperacute transplant rejection is mediated by:**
- a) T cells **T or F**
 - b) Preformed antibodies **T or F**
 - c) Macrophages **T or F**
 - d) Natural killer cells **T or F**
8. **Graft-versus-host disease (GVHD) occurs in which type of transplant?**
- a) Heart transplant **T or F**
 - b) Kidney transplant **T or F**
 - c) Bone marrow transplant **T or F**
 - d) Corneal transplant **T or F**
9. **Which test is commonly used to check for compatibility before a transplant?**
- a) Coombs test **T or F**
 - b) Cross-matching **T or F**
 - c) ELISA **T or F**
 - d) PCR **T or F**

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10. Which immunosuppressive drug inhibits IL-2 production?

- a) Cyclosporine **T or F**
- b) Methotrexate **T or F**
- c) Infliximab **T or F**
- d) Azathioprine **T or F**

11. Neonatal transfusion is primarily used for:

- a) Treating hypertension **T or F**
- b) Preventing heart disease **T or F**
- c) Managing severe anemia **T or F**
- d) Enhancing liver function **T or F**

12. Which of the following is NOT an adverse reaction to blood transfusion?

- a) Fever **T or F**
- b) Allergic reaction **T or F**
- c) Hyperglycemia **T or F**
- d) Hemolysis **T or F**

13. Haemolytic disease of the newborn (HDN) occurs due to:

- a) Rh incompatibility **T or F**
- b) Vitamin deficiency **T or F**
- c) Infection **T or F**
- d) Genetic mutation **T or F**

14. Which test detects antibodies bound to RBCs in hemolytic anemia?

- a) Direct Coombs test **T or F**
- b) ELISA **T or F**
- c) Western blot **T or F**
- d) PCR **T or F**

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15. Which infection is commonly screened before blood donation?

- a) Malaria **T or F**
- b) Tuberculosis **T or F**
- c) HIV **T or F**
- d) Diabetes **T or F**

16. Which method is commonly used for antibody identification in blood banking?

- a) Indirect Coombs test **T or F**
- b) PCR **T or F**
- c) ELISA **T or F**
- d) Western blot **T or F**

17. Which of the following is an example of a blood group system other than ABO?

- a) HLA **T or F**
- b) Rh **T or F**
- c) MHC **T or F**
- d) TLR **T or F**

18. What is the purpose of antibody titration in transfusion medicine?

- a) To measure antibody concentration **T or F**
- b) To detect bacterial infections **T or F**
- c) To diagnose leukemia **T or F**
- d) To determine RBC count **T or F**

19. Which virus causes secondary immunodeficiency by attacking CD4+ T cells?

- a) EBV **T or F**
- b) Hepatitis B **T or F**
- c) HIV **T or F**
- d) Influenza **T or F**

