



Technical University of Mombasa

Faculty of Applied and Health Sciences

DEPARTMENT OF MEDICAL SCIENCES
UNIVERSITY EXAMINATION FOR THE DEGREE OF BACHELOR OF MEDICAL
LABORATORY SCIENCES

AML 4221: IMMUNOLOGY

SPECIAL/SUPPLEMENTARY EXAMINATION

FEBRUARY 2013 SERIES

2 HOURS

Instructions to candidates:

This paper consist of **TWO** sections **A** and **B**

Section A –Contains MCQS, any wrong response will be penalised. Answer **ALL** questions in **Section B**.

SECTION A – MCQs – (30marks)

1. The following immunoglobulin fix complement:
 - a) IgM
 - b) IgD
 - c) IgE
 - d) IgG

2. Immunity acquired as a result of vaccination :
 - a) Natural immunity
 - b) Passive immunity
 - c) Cellular immunity
 - d) Artificial active immunity

3. Antigen binding by antibody occurs at :
 - a) Fragment of crystallization
 - b) Fragment of Antigen binding
 - c) Hinge region
 - d) Constant region

4. The light chains of immunoglobulin are:
 - a) Lambda chains
 - b) Kapa Chains
 - c) Gamma chains
 - d) Delta chains

5. The two heavy chains of an immunoglobulin are held together by
 - a) J-Chain
 - b) Intra-chain disulphide bonds
 - c) Inter-chain disulphide bonds
 - d) T-piece

6. The following immunoglobulin participate in secondary immunity
 - a) IgM
 - b) IgG
 - c) IgA
 - d) IgE

7. Immunoglobulin that enhances primary immunity include:-
 - a) IgA
 - b) IgD
 - c) IgM
 - d) IgG

8. Interaction of Antigens with immune cells takes place in :
- a) Spleen
 - b) Thymes
 - c) Rymphnodes
 - d) Bone marrow
9. The cells that attack virus infected of cancer alls include:-
- a) B Cells
 - b) Thymes
 - c) Interferous
 - d) Mast cells
10. IgM is associated with :
- a) J Chain
 - b) Pentamers structure
 - c) Dimeric structure
 - d) Monomeric structure
11. The main cardinal signs of inflammation include :
- a) Redness
 - b) Oedema
 - c) Fever
 - d) Fatigue
12. The following are complement products of the classical pathway:
- a) C1
 - b) C3
 - c) Factor D
 - d) Factor B

13. Biological functions of complement include :

- a) Lysis
- b) Precipitation
- c) Haemolysis
- d) Agglutination

14. Non specific immunity is:

- a) Antigen dependent
- b) Immediate
- c) Mediated by T cells
- d) Acquired

15. The cells that are the main line of defence in non specific. Immunity include

- a) Macrophage
- b) Neutrophils
- c) Lymphocytes
- d) NK cells

16. The following are major Loci of class I gene complex of MHC:

- a) B Loci
- b) C Loci
- c) A loci
- d) DR Loci

17. The class II gene complex contains:

- a) B loci
- b) DP Loci
- c) DQ Loci
- d) A loci

18. The human MHC is located on :

- a) Chromosome 6
- b) Chromosome 17
- c) Chromosome 9
- d) Chromosome 7

19. Class I antigens are expressed on :

- a) All nucleated cells
- b) Platelets
- c) Red blood cells
- d) Macrophages

SECTION B – (40marks) Answer ALL questions

- 1. a. Define the term cytokine **(2marks)**
- b. Outline other terms used to describe particular types of cytokines **(8marks)**
- c. Discuss categories of cytokines **(10marks)**
- 2. Discuss classical and alternative pathway of complement activation **(20marks)**