JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY

UNIVERSITY EXAMINATIONS 2019/2020

RESIT EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE (BIOLOGICAL SCIENCES)

SBI 3315: IMMUNOLOGY

Date…….Time……

Time: 2 Hrs

INSTRUCTIONS:

1. **Answer ALL questions in section A (3 Marks each)**
2. **Answer any TWO questions in section B (20 Marks each)**
3. **Use illustrations where appropriate**

SECTION A (30 MARKS) ANSWER ALL QUESTIONS

1. Explain two mechanisms through which innate immunity remains effective despite rapid evolution of microbes. (3 marks)
2. Giving examples of their functions, list any three types of collectins. (3marks)
3. State three reasons why substances may lack immunogenicity. (3 marks)
4. How would you determine if a particular immune response is a humoral Response? (3 marks)
5. What are the defining differences between innate and adaptive immunity? (3 marks)
6. Why is affinity maturation a logical consequence of Clonal Selection? (3 marks)
7. Graft rejection is an immunological phenomenon, defined by which three properties? (3 marks)
8. What are the differences between central and peripheral tolerance? (3 marks)
9. Using examples, describe any three types of hypersensitivity reactions. (3 marks)
10. Describe two mechanisms involved in CD8+ T cell cytotoxicity. (3 marks)

SECTION B (40 MARKS) ANSWER ANY TWO QUESTIONS

11. Describe immune activation and regulation of complement pathways. (20 marks)
12. With specific examples, discuss immune regulators of immune cell trafficking. (20 marks)
13. Discuss the plasticity of T cell immune responses against pathogens. (20 marks)
14. Giving specific examples, discuss qualities of a successful vertebrate pathogen. (20 marks)