



SOUTH EASTERN KENYA UNIVERSITY

UNIVERSITY EXAMINATIONS 2016/2017

FIRST SEMESTER EXAMINATIONS FOR DEGREE OF BACHELOR OF SCIENCE IN BIOLOGY, BACHELOR OF EDUCATION SCIENCE & BACHELOR OF SCIENCE IN BIOCHEMISTRY & MOLECULAR BIOLOGY

SBL 310: IMMUNOLOGY II

DATE: 16TH DECEMBER, 2016

TIME: 4.00-6.00 P.M

INSTRUCTIONS TO CANDIDATES

- (a) Answer ALL questions in Section A**
 - (b) Answer ANY TWO questions in Section B**
 - (c) Illustrate your answers with well labeled diagrams where appropriate**
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SECTION A (30 marks)

1. State the three defining characteristics of the immune system. **(3 marks)**
2. List four differences between T-cell and B-cell receptors. **(4 marks)**
3. State the general immune effector mechanisms. **(3 marks)**
4. Briefly describe the process of opsonization. **(3 marks)**
5. Outline the role of cytokines in the immune system. **(4 marks)**
6. Describe immune tolerance and regulation of the immune response. **(4 marks)**
7. State the mechanisms of virus immune evasion. **(4 marks)**

8. State the antigen receptors for:
- (a) B-cells (1 mark)
 - (b) Helper T-cells (1 mark)
 - (c) Killer T-cells (1 mark)
9. Define 'toll like receptors'. (2 Marks)

SECTION B(40 marks)

10. Discuss hypersensitivity and allergies. (20 Marks)
11. Discuss the role of major histocompatibility complex. (20 marks)
12. Describe the host immune responses to bacteria. (20 marks)
13. Discuss cancer immunotherapy. (20 Marks)