



**TECHNICAL UNIVERSITY OF MOMBASA**  
**FACULTY OF APPLIED AND HEALTH SCIENCES**  
**DEPARTMENT OF ENVIROMENT & HEALTH SCIENCES**

**UNIVERSITY EXAMINATION FOR:**  
**BACHELOR OF SCIENCE IN COMMUNITY HEALTH**  
**BSCH 14J/YEAR4/ SEMESTER2**

**AML 4411: VACCINES AND BIOLOGICALS**  
**SEMESTER EXAMINATION**

**SERIES: SEPT. 2017**

**TIME: 2 HOURS**

***Instructions to Candidates***

This paper consists of FIVE questions

Answer question ONE (COMPULSORY) and any other TWO questions.

***This paper consists of two printed pages.***

**Question ONE**

- a) Briefly describe causes of mismatch between the vaccines and circulating virus. [4 marks]
- b) Describe any four vaccine excipients. [4 marks]
- c) Briefly describe four potential advantages of combination vaccines. [4 marks]
- d) Briefly explain any four common vaccine adverse reactions. [4 marks]
- e) Explain how cold chain can be strengthened in Kenya. [4 marks]
- f) Describe any five biologicals. [5 marks]
- g) Explain five benefits of pharmacovigilance. [5 marks]

**Question TWO**

Describe any 10 secondary vaccines (including administration schedule) that are commonly used by public health. [20 marks]

### **Question THREE**

Although vaccination is the most cost-effective preventive health intervention presently known in modern medicine, most countries are yet to fully benefit from it. Discuss challenges facing vaccination programmes in Kenya. [20 marks]

### **Question FOUR**

Describe Anti-snake venom (ASV) should be used in management of snakebites. Write brief notes on ASV under the following sub-topics

- a) Mode of administration. [8 marks]
- b) Side effects of ASV. [4marks]
- c) Causes attributed to high snake bite mortality. [8 marks]

### **Question FIVE**

Vaccine concerns date back to the eighteenth century during a time of smallpox epidemics in colonial America. Despite increased survival rates among vaccinated, opposition to vaccination remains strong. Discuss the history of anti-Vaccine movements.