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# TECHNICAL UNIVERSITY OF MOMBASA

FACULTY OF APPLIED AND HEALTH SCIENCES

DEPARTMENT OF ENVIRONMENT & HEALTH SCIENCES

**UNIVERSITY EXAMINATION FOR:**

BACHELOR OF SCIENCE IN COMMUNITY HEALTH (BSCH13J)

AML 4411: VACCINES AND BIOLOGICALS

END OF SEMESTER EXAMINATION

**SERIES:** APRIL 2016

**TIME:** 2 HOURS

**DATE:** Pick Date Apr 2016

## Instructions to Candidates

You should have the following for this examination

-Answer Booklet, examination pass and student ID

This paper consists of Choose Nochoose Sect/Quest. Attempt question ONE (Compulsory) and any other TWO questions.

**Do not write on the question paper.**

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## Question ONE

- a) Describe any five vaccine excipients [5 marks]
- b) Briefly describe five potential advantages of combination vaccines [5 marks]
- c) Briefly explain any five common vaccine adverse reactions. [5 marks]
- d) Describe any five biologicals. [5 marks]
- e) State the herd immunity theory. [1 mark]
- f) In the context of vaccines, explain four conditions that must be met for herd immunity to occur. [4 marks]
- g) Explain briefly the contribution of the following people to vaccine history. [5 marks]
  - i. Louis Pasteur

- ii. Albert Bruce Sabin
- iii. Edward Jenner
- iv. Glenny and Hopkins
- v. Valenzuela *et al*

### **Question TWO**

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 THREE**

Despite strong evidence that a serious adverse event is not related to a vaccine, perceptions of harm may persist and may potentially have a negative impact on vaccination services.

- a) Discuss the importance of pharmacovigilance. [10 marks]
- b) Describe how it can be strengthened in Kenya. [10 marks]

### **Question FOUR**

Write brief notes on immunity under the following sub topics

- a) Innate immunity. [4 marks]
- b) Natural passive immunity. [4 marks]
- c) Natural active immunity. [4 marks]
- d) Artificial passive immunity. [4 marks]
- e) Artificial active immunity. [4 marks]

### **Question FIVE**

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