



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)

AML4411: 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.

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]