



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 : 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) What is artificial acquired active immunity? [2 marks]
- b) Briefly describe four benefits of pharmacovigilance. [4marks]
- c) Explain four conditions that must be met for herd immunity to occur, in the context of vaccines. [4 marks]
- d) List any four vaccine adjuvants [4 marks]
- e) Briefly describe four potential disadvantages of combination vaccines [4 marks]
- f) Describe briefly four characteristics of a good vaccine. [4marks]
- g) Explain four advantages of inactivated poliovirus vaccine- IPV. [4 marks]
- h) Explain briefly the contribution of the following people to vaccine history. [4 marks]
 - i. Theiler and Smith
 - ii. Louis Pasteur
 - iii. Provost *et al*

Question TWO

India has been certified polio-free by the World Health Organization after going three years without an endemic case of polio. The eradication of polio in India is heralded as one of the biggest achievements in global health efforts. Discuss any 10 strategies that were put up by India towards this great achievement. [20 marks]

Question THREE

Vaccines are sensitive biological products which may become less effective or destroyed when exposed to temperatures outside the recommended range.

- a) Discuss any three elements of cold chain. [6 marks]
- b) Discuss how it can be strengthened in Kenya. [14 marks]

Question FOUR

Discuss any 4 classes of vaccines based on technology used during the manufacturing process.

Question FIVE

Although rabies is a fatal disease in humans it is preventable. Discuss

- a) Pre-exposure prevention. [10 marks]
- b) Post-exposure prophylaxis. [10 marks]