



# TECHNICAL UNIVERSITY OF MOMBASA

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FACULTY OF APPLIED AND HEALTH SCIENCES

DEPARTMENT OF ENVIRONMENT & HEALTH SCIENCES

**UNIVERSITY EXAMINATION FOR:**

**MASTER OF PUBLIC HEALTH**

**APH 5116: DISEASE SURVEILLANCE**

**SPECIAL/ SUPPLEMENTARY EXAMINATIONS**

**SERIES: SEPTEMBER 2018**

**TIME: 3 HOURS**

**DATE: Sep 2018**

## **Instructions to Candidates**

You should have the following for this examination

*-Answer Booklet, examination pass and student ID*

This paper consists of **SIX** choose Sect/Quest. Attempt Choose instruction.

Answer question ONE (COMPULSORY) and any other three questions

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

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## **Question ONE (30 MARKS)**

- a) Discuss the main uses of disease surveillance (8 marks)
- b) Thresholds are markers that indicate when something should happen or change. They help surveillance and program managers answer the question, "When should I take action, and what will that action be?"
  - i. Explain the two main sources of thresholds (3 marks)
  - ii. Discuss the two types of thresholds used in disease surveillance (6 marks)
- c) The usefulness of a surveillance system is evaluated by looking at how satisfactorily it meets certain indicators. Discuss the key indicators of a successful surveillance system (7 marks)
- d) Health facilities are the most important source of disease surveillance information. As the sub county disease focal person, in what ways do you motivate the staff in these facilities during the supervisory visits? (6 marks)

**Question TWO (30 MARKS)**

During the previous 6 years, one to three cases per year of tuberculosis had been reported to Kilifi County department of health. During the past 3 months, 17 cases have been reported. All but two of these cases have been reported from one Sub County. The local newspaper published an article about one of the first reported cases, which occurred in a girl aged 3 years. Describe the possible causes of the increase in reported cases (30 marks)

**Question THREE (30 MARKS)**

A health center in your sub county has reported a suspected case of cholera to the sub County.

- a) What case definition should the health center use to report the suspected case? (8 marks)
- b) In what ways can the community help in identifying possible cholera cases within the community? (12 marks)
- c) How should the specimen collected in (b) above have been prepared, stored and transported? (10 marks)

**Question FOUR (30 MARKS)**

Periodic evaluation of surveillance systems usually help in identifying ways through which the system's operation and efficiency can be improved. Discuss the attributes used to evaluate surveillance systems (30 marks)

**Question FIVE (30 MARKS)**

**Plague outbreak in Malikini village, from 1 to 14 September, 2008**

Date	Cases	Deaths
1-09-08	2	1
2-09-08	2	1
3-09-08	8	0
4-09-08	4	0
5-09-08	5	0
6-09-08	3	0
7-09-08	0	0
8-09-08	1	0
9-09-08	4	0
10-09-08	2	0

11-09-08	5	0
12-09-08	5	0
13-09-08	5	0
14-09-08	2	0
<b>Total</b>	<b>48</b>	<b>2</b>

- Draw a line graph to show epidemic of plague in Malikini using the data provided in Table above (see the graph below) (5 marks)
- Review the graph you created in (a) above. Describe what the graph shows, beginning with the onset of the first case (5 marks)
- What was the case fatality rate in the first 2 days? (6 marks)
- What was the overall case fatality rate after the outbreak? Explain the apparent difference (8 marks)
- Why do you think there is a difference between the two periods? (6 marks)

**Question SIX (30 MARKS)**

Discuss ways through which countries or counties or local authorities can improve reporting for purposes of disease surveillance (30 marks)