



TECHNICAL UNIVERSITY OF MOMBASA

FACULTY OF APPLIED AND HEALTH SCIENCES

DEPARTMENT OF ENVIRONMENT & HEALTH SCIENCES

UNIVERSITY EXAMINATION FOR:

MASTER OF PUBLIC HEALTH

APH 5116: DISEASE SURVEILLANCE

END OF SEMESTER EXAMINATION

SERIES: AUGUST 2019

TIME: 3 HOURS

DATE: Pick Date Jul 2019

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 Choose instruction.

Answer question ONE (COMPULSORY) and any other three questions

Do not write on the question paper.

QUESTION ONE (30 MARKS)

- a) The County health team (CHT) at Mombasa County does not understand the usefulness a disease surveillance system in the County. You have been requested to go and convince this team on the need for a functional surveillance system in Mombasa County. Discuss the content of your talk to the CHT on 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)
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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
Total	48	2

- 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)

The recent floods made Busia district impossible to reach. All road communication with Kisumu city had been cut. On Saturday, following a heavy rain, a fuel tanker slipped and rolled into Nzoia river spilling 10 tonnes of benzene. Benzene is a chemical known to cause cancer and other health concerns. The river is the only main source of water and fish for three towns in Busia district. After hearing reports on the local radio, The Director of Medical services requested the local DMO to send a team to assess the situation and report back to her promptly (30 marks).

- What should be the purpose of this investigation?
- In addition to the DMO, who else should be a part of this team?
- What are the main objectives of this team?
- What are possible messages for the surrounding communities?