



MASINDE MULIRO UNIVERSITY OF SCIENCE AND TECHNOLOGY

(MMUST)

MAIN CAMPUS

UNIVERSITY EXAMINATIONS

MAIN EXAM

2023/2024 ACADEMIC YEAR

FOURTH YEAR FIRST SEMESTER EXAMINATION

FOR THE DEGREE OF BACHELOR OF SCIENCE IN EPIDEMIOLOGY AND
BIOSTATISTICS

COURSE CODE: HEM 418

COURSE TITLE: FIELD EPIDEMIOLOGY

DATE: 7/12/2023

TIME: 8.00-10.00 AM

INSTRUCTIONS TO CANDIDATES:

ANSWER ALL QUESTIONS IN SECTION A AND ANY TWO QUESTIONS IN
SECTION B

TIME: 2 Hours

MMUST observes ZERO tolerance to examination cheating

Paper Consists of 3 Printed Pages. Please Turn Over



SECTION A(40 Marks): Answer all questions in this section

1. Define the following as used in Field Epidemiology: [4 mks]
 - a. Validity
 - b. Specificity
 - c. Sensitivity
 - d. Case definition
2. State the FOUR [4] potential sources of surveillance data [4 Marks]
3. Name any four diseases of public health importance that are targeted for eradication or elimination in Kenya [4 Marks]
4. Determine ways in which and to whom surveillance data can be disseminated 4 marks
5. Describe the characteristics outbreak investigation 4 marks
6. Distinguish between Active and sentinel giving two advantages in each case 4 marks
7. State Eight [8] main functions of surveillance for outbreak investigation 4 marks
8. Explain ANY FOUR [4] objectives of Integrated Disease Surveillance and Response (IDSR), as recommended by WHO to strengthen communicable disease surveillance [4 Marks]
9. Highlight eight roles of Sub county surveillance officers and medical officers surveillance system [4 Marks]
10. State at least four weaknesses in disease surveillance [4 Marks]

SECTION B[30 marks]: Answer any two questions in this section

1. Discuss the STEPS for establishing Community Based Surveillance systems [15 Marks]
2. Assume you the monitoring and evaluation officer in the department of public health in your facility, synthesize how you may evaluate the facility surveillance system [15 Marks]
3. A report of food poisoning outbreak in one of the local University in Kakamega was received by the County Health authority in August, 2020. The County Health Director requested for support by Ministry of Health to investigate the report of the suspected food poisoning. From the initial investigation report, it was found out that, most of the students complained of abdominal pains and diarrhea. During the investigation various foods eaten were listed among those who got ill and those who did not get ill. The following data was obtained during the investigation:

	No. of persons who ate specified food			No of persons who did not eat specified food		
	Ill	Well	Total	Ill	Well	Total
Sukuma	30	21	51	24	16	40
Mutura	27	17	44	27	19	46
Githeri	22	14	36	32	23	55
Nyama Choma	47	15	62	7	22	29
Ugali	8	6	14	46	31	77

Based on the above data, answer the following questions;

- (a) Calculate the attack rate for all the FIVE foods eaten by the students (12 Marks)
- (b) Giving reasons which of the 5 food items above could have been the MOST likely cause of the food poisoning outbreak? (3 Marks)

