



UNIVERSITY OF SWAZILAND
Faculty of Health Sciences
Department of Environmental Health Science

FINAL EXAMINATION PAPER 2016

TITLE OF PAPER : COMMUNICABLE DISEASES CONTROL

COURSE CODE : EHM 207

DURATION : 2 HOURS

MARKS : 100

INSTRUCTIONS : READ THE QUESTIONS & INSTRUCTIONS
CAREFULLY

: QUESTION **ONE IS COMPULSORY** THEN
ANSWER **ANY OTHER THREE** QUESTIONS

: EACH QUESTION **CARRIES 25** MARKS.

: WRITE NEATLY & CLEARLY

: BEGIN EACH QUESTION ON A SEPARATE
SHEET OF PAPER.

DO NOT OPEN THIS QUESTION PAPER UNTIL PERMISSION IS GRANTED BY THE
INVIGILATOR.

QUESTION 1

You are employed as the environment health officer in your area of jurisdiction otherwise known as Community Y. Late last night there was an unusual emotional turmoil in your community. Three children aged between two and five years were certified dead on arrival at the clinic. The sister in charge of the clinic also reported to you that a few hours back in a space of 3 hours fifteen children came to the clinic presenting severe dehydration, leg cramps and profuse watery diarrhoea and were referred to the nearest community health centre where they were admitted. You carry out some descriptive epidemiology and discover that the children are from a village within the community. Further investigations were carried out and it came out that all the children affected attend the same neighborhood care point (NCP). This care point has 35 children all together. When probing the care taker at the NCP she highlighted that they all ate the same food. One of the reported dead kids came in the morning and her guardian reported that she had diarrhoea since morning. It was also noted that they use one hand-washing basin before eating. Further investigations revealed that some of the children had been taken to traditional healers presenting the same symptoms. Out of the 32 kids, 22 reported to have washed their hands and 18 had diarrhoea and among the remaining 10 who did not wash hands, 6 had the diarrhoea.

- a) From the brief information you got from investigations, what could be the possible disease these children are suffering from? Explain your answer [3]
- b) What is the epidemiological term given to the child who was reported to have come with the diarrhea in the morning? Why? [2]
- c) Represent information given the scenario in a 2x2 table [4]
- d) As an epidemiologist, it is important that you determine if there is any association between the hand-washing water and the disease. And you are required to measure the strength of this association before you can come up with a possible control measure. Calculate the relative risk and attributed risk for the above scenario [6]
- e) Outline the control measures to be undertaken to prevent this diseases from becoming community outbreak. [10]

[25 marks]

QUESTION 2

- a) Malaria is one of the communicable disease of interest globally and as a developing country (Swaziland) is not spared from the impacts of the disease. Discuss the significance of this disease that has made it one of the priority diseases to address. [5]
- b) In the quest to eliminate malaria, the World Health Organization (WHO) has come up with a practical model known as the malaria elimination continuum. Swaziland through the Malaria Control Programme has also adopted this strategy. Discuss the four elements of the strategy giving clear examples of activities Swaziland is currently embarking on the address malaria in the country through the National Malarial Control Programme. [20]

[25 marks]

QUESTION 3

Zika virus is a communicable disease that was first discovered in Africa (Uganda) in 1947. However, on the 4th February 2016, the World Health Organization has declared Zika Virus as a “public health emergency of international concern”. This therefore makes this disease an area of major focus for all countries in the world including Swaziland.

- a) Give five symptoms of this disease [5]
- b) As stated above, Swaziland is not spared from this worldwide disease scare. The Ministry of health has therefore hired you as the head of the programme established to keep watch on this disease of “public health emergency of international concern”. Using the steps in the management of a communicable disease outbreak, outline how your programme is going to ensure a Zika virus free Swaziland. [20]

[25 marks]

QUESTION 4

According to WHO (2014), Swaziland is among those countries with an estimated Tuberculosis (TB) incidence of 1,198 per every 100,000 population. TB-related mortality has increased from 76 per 100,000 in 1990 to the current level of 317 per 100,000 populations.

This mortality figure translates to about 2,780 deaths annually due to TB alone; and an estimated 17,000 TB-related deaths by 2015 if drastic actions are not taken. Current MOH statistics show that 20% of in-patient deaths are attributable to tuberculosis. Nonetheless, the country is and has been putting up strategies to control the increasing TB incidence and mortality.

- a) It is incumbent for every countries including Swaziland to eliminate these challenges stated above. Discuss the imperatives for controlling TB in the coming years. [7]
- b) Discuss the limitations of the TB control strategy which have contributed to the above increase in both mortality and incidence rates. [10]
- c) What is the difference between MDR TB and XDR TB [4]
- d) Countries have come up with National Tuberculosis Programmes (NTP) which play a major role in the control of the disease. Discuss these in terms of definition and objectives [4]

[25 marks]

QUESTION 5

- a) Differentiate between case reports and disease outbreak or event reports [5]
- b) In the control of communicable diseases, surveillance is crucial.
 - i) Discuss what is meant by surveillance. [5]
 - ii) Name five communicable diseases that are under World Health Organization (WHO) surveillance. [5]
- c) Global trends have played a major role in the emergence and reemergence of communicable diseases. Discuss five global trends stating how they have contributed in the emergence and reemergence of communicable diseases. [10]

[25 marks]