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**University Examinations 2014/2015**

THIRD YEAR SECOND SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE IN FOOD SCIENCE AND NUTRITION

**AFN 2305: FOOD AND NUTRITION SURVEILLANCE**

 **DATE: APRIL 2015 TIME: 2 HOURS**

**INSTRUCTIONS:** *Answer question* ***one*** *and any other* ***two*** *questions*

**QUESTION ONE (30 MARKS)**

1. State the main difference between nutrition surveillance and nutrition monitoring systems

(2 Marks)

1. Describe the relevance of nutrition surveillance to any state (5 Marks)
2. Citizens of Kenya have gone through a food shortage period for the past four years. What could be wrong with Kenya’s food and nutrition monitoring system? (4 Marks)
3. Explain why food and nutrition information is irrelevant unless used (2 Marks)
4. as a country nutritionist for Isiolo County, Describe how you would use the following:
5. Active surveillance (2 Marks)
6. Environmental surveillance (2 Marks)
7. Differentiate between the following terms:
8. Incidence and prevalence (1 Mark)
9. Morbidity and mortality (1 Mark)
10. Epidemic and pandemic (1 Mark)
11. Endemic and sporadic (1 Mark)
12. The frequency of influenza viral infections increases during the cold seasons. The number of cases in Nanyuki increased in one month by 220. The total number of people in Nanyuki is 128,000. Calculate the morbidity rate (2 Marks)
13. India has achieved over 70% immunization for polio. Define the kind of immunity possessed by the India population (2 Marks)
14. State the difference between qualitative and quantitative data. How is qualitative data collected? (2 Marks)
15. Describe data collection methodologies in food and nutrition surveillance (3 Marks)

**QUESTION TWO (20 MARKS)**

Researchers followed a population of 3,000 women aged over 65 years who did not have osteoporosis, over a 10 year period and measured the number of cases of osteoporosis diagnosed during that time period. The main interest was the effect of exercise on development of osteoporosis. The subjects were divided in two groups: 1,500 women who exercised regularly (exposed) and 1,500 women who did not exercise regularly (unexposed) . During the 10 year period, 500 in those women who exercised regularly and 700 in those who did not, the number of person years at risk was 10,300 in the exposed group and 8,350 in the unexposed groups.

1. Calculate the risk ratio, odd ratio and incidence rate ratio for the effect of regular exercise on osteoporosis in these women and provide a one sentence interpretation for each result

(8 Marks)

Researcher then conducted another study of osteoporosis in women aged under 55 years. They followed 1,500 women who exercised regularly and 1,500 women who did not for a period of 10 years. They recorded 5 cases of osteoporosis in those who exercised and 7 cases in those who did not. The number of person year at risk was 8,890 in the exposed group and 7,300 in the unexposed group.

1. Calculate the risk ratio, odds ratio and incidence rate ratio for the effect of regular exercise on osteoporosis in these 3,000 younger men and provide a one sentence interpretation of these results (8 Marks)
2. Describe the differences in the results obtained from the two studies (4 Marks)

 **QUESTION THREE (20 MARKS)**

1. Define sentinel surveillance in food and nutrition and give an example (2 Marks)
2. Discuss the following indicators for food and nutrition surveillance:
3. Ecology (3 Marks)
4. Production (3 Marks)
5. Health (2 Marks)
6. Income (2 Marks)
7. Discuss the main characteristics of food and nutrition surveillance indicators (8 Marks)

**QUESTION FOUR (20 MARKS)**

1. The Republic of South Africa plans to establish a food and nutrition surveillance system. What would you advice them as the main functions of the system? (4 Marks)
2. What are the main causes of malnutrition in the general populations? (4 Marks)
3. State the services involved in initial assessment of a food and nutrition surveillance system

 (5 Marks)

1. You are employed as a consultant to address food and nutrition problems in Gabon. Discuss the approach to define various groups at risk (6 Marks)
2. Define the term food and nutrition surveillance (1 Mark)