

Time - 3 Hours

MM-70

Note: Please read the question Paper carefully and attempt any five questions.

Q 1. Local health department got information from community health volunteer on 15th April that since yesterday days four cases of diarrhoea with vomiting had occurred in the shyamgarh village. District IDSP Unit started the investigation. Same day, the physician from the primary Health Center reported that 20 people with vomiting and diarrhea had visited the clinic since yesterday and all were found to be from the shyamgarh village.

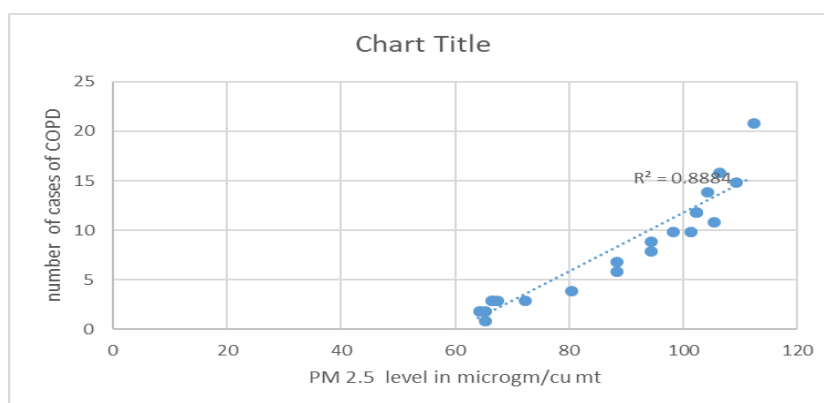
Based on the above description. Answer the following questions

- What should be the next steps in investigating this potential outbreak? (10 marks)
- Who should be part of the disease outbreak investigation team and what should be their major roles and responsibilities? (4 marks)

Or

Q1. Write classification of epidemics. Give an example of point source epidemic. Discuss the main features of a point source epidemic (14 marks)

Q 2. Air Quality Surveillance Programme was launched in a certain community. In order to ascertain the health impact of poor air quality on allergic rhinitis was taken as health outcome measure. The chart below depicts findings from preliminary analysis



Based on above description answer the following questions

- Interpret this chart. (4 marks)
- Write the epidemiological hypothesis based on interpretation of this chart. (3 marks)
- How can you test the epidemiological hypothesis you formed? (4 marks)
- Besides the use depicted above, what are the other uses of data from disease surveillance system? (3 marks)

Or

Q2. Write definition of disease surveillance. Explain the difference between active and passive surveillance with appropriate example? (14 marks)

Q 3. The information given below from a year long follow up study of pregnant mother until live births.

	values	Names (disease or exposure)
Number of mothers, total (N)	3,000	
Proportion with disease in total	10.0 %	low birth weight
Proportion exposed of total	50.0 %	organic food consumption
Proportion of disease among those who are not exposed	11.6%	

- a) Identify the study design (2 marks)
- b) Write down two advantages of this study design. (6 marks)
- c) Write two types of biases in this study design with appropriate examples (6 marks)

Q 4. Answer the following questions.

- a) Explain cross sectional study design with appropriate example (8 marks)
- b) Can cross sectional study be used to calculate incidence of disease? Support your answer with appropriate reason (6 marks)

Q 5. The data below is from a new screening test for colon cancer

Result of screening test	Persons having colon cancer	Persons not having colon cancer
Positive	132	983
Negative	45	63650

- a) Calculate sensitivity, specificity, and positive predictive value of the screening test. (8 marks)
- b) Write difference between sensitivity and specificity of screening test. (6 marks)

Q 6. Write the differences between case control and cohort study (14 marks)

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