

EPIDEMIOLOGY

Time: 3 Hours

Max Marks: 70

Note: Answer all questions

Give Diagrammatic representation wherever necessary.

Write an essay on the following:

2 X 10 = 20

1. Enumerate the applications of epidemiology in public health. Explain the different measures of association with relevant examples.
2. Describe the concept of study designs in epidemiology. Compare and contrast cohort studies and case-control studies with specific examples of how they are used in public health research.

Write short note on the following:

6 X 5 = 30

3. Discuss the role of the epidemiological triad in understanding infectious disease transmission.
4. Explain the principles of randomization in clinical trials.
5. Define and differentiate between positive predictive value, and negative predictive value in the context of diagnostic testing.
6. What are the sources of bias in epidemiological studies, and how can they be minimized?
7. Describe the key steps involved in conducting a field investigation of an outbreak.
8. Explain the role of confounding in epidemiological studies and describe methods to control for confounders.

Write briefly on the following:

10 X 2 = 20

9. Define "Incidence" and "Prevalence."
10. What is the null hypothesis in epidemiological research?
11. Name two types of observational epidemiological studies.
12. What is a "Case fatality rate"?
13. Define "Relative risk."
14. Explain the term "Epidemic curve."
15. What is the role of a "control group" in epidemiology?
16. What is "Secondary prevention" in public health?
17. Define "confounding variable."
18. Explain the term "attributable risk."