

M.Sc. EPIDEMIOLOGY EXAMS
FIRST YEAR
PAPER I – PRINCIPLES OF EPIDEMIOLOGY AND BIostatISTICS

Q.P. Code: 313001

Time: Three hours

Maximum: 100 Marks

I. Elaborate on:

(2 x 20 = 40)

1. Write briefly on the probability distributions that are commonly used in epidemiological studies and describe the settings in which each is used.
2. Describe the term 'confounding' in epidemiological studies. State the methods for controlling confounding and list the advantages and disadvantages of each method.

II. Write notes on:

(10 x 6 = 60)

1. Briefly explain the types of graphs that can be used to display continuous observations.
2. Write briefly on the commonly used 'measures of dispersion' – the range, the inter-quartile range and the Standard Deviation.
3. What is analysis of variance? State the assumptions needed for analysis of variance.
4. Explain how a chi-square test is performed for hypothesis testing of two dichotomous random variables.
5. Briefly explain the statistical measures to determine the strength of association between two independent nominal random variables.
6. Briefly explain the importance of ecological studies and list the limitations.
7. Describe the essential feature and purpose of an 'intention to treat analysis and state its main limitations.
8. Write briefly on Standardized Mortality Rate (SMR) and its advantages.
9. Define the term 'randomization' in clinical trials. Write briefly the procedure for randomization.
10. What are the essential elements of a Participant Information Sheet?
