

SYLLABUS: BIO-STATISTICS

Paper-I: 1.5 hours

(Multiple choice questions)

1. Basic Research method

Basic concept of confounding and effect modification; Measures of disease frequency and association;

2. Basic Biostatistics

Descriptive statistics; visualization of data; basic matrix algebra; inferential statistics-parametric & nonparametric.

Paper-II: 1.5 hours

(Short answer questions)

1. Statistical methods for time to event data

Features of time to event data; survival curve; hazard ratio; Comparison of survival curves; cox-proportional hazard model;

2. Measurement error models

Linear and generalized linear models, Measurement error and its consequence;

3. Semi-parametric regression techniques

Linear models, Linear mixed effects model, generalized linear model, generalized additive model