

RAMAKRISHNA MISSION VIDYAMANDIRA

(Residential Autonomous College affiliated to University of Calcutta)

B.A./B.Sc. FOURTH SEMESTER EXAMINATION, MAY 2016

SECOND YEAR [BATCH 2014-17]

STATISTICS (General)

Date : 30/05/2016

Time : 11 am – 1 pm

Paper : IV

Full Marks : 25

[Use a separate Answer Book for each group]

Group - A

1. Answer **any three** questions : [3×5]
- Write the advantages of sampling over complete enumeration.
 - Derive the standard error of sample mean when a sample is drawn from a population using simple random sampling without replacement.
 - Write the advantages of Stratified Random Sampling over Simple Random Sampling.
 - In a Stratified Random Sampling how will you determine the sample size of each stratum? Hence obtain the Bowley's formula for proportional allocation.

Group - B

4. Answer **any one** question : [1×10]
- Explain what do you understand by 'Analysis of Variance'. State the basic assumptions in an ANOVA. Derive the partitioning of total Sum of squares for a one way classified data into component sum of squares in ANOVA.
 - Describe the technique of ANOVA in 2-way classified data, stating clearly the assumptions you make. Provide ANOVA tube as well. (Assume 'm' observations per cell).

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