

RAMAKRISHNA MISSION VIDYAMANDIRA

(Residential Autonomous College affiliated to University of Calcutta)

B.A./B.Sc. FOURTH SEMESTER EXAMINATION, MAY 2018

SECOND YEAR (BATCH 2016-19)

STATISTICS (General)

Date : 28/05/2018

Time : 11.00 am – 1.00 pm

Paper : IV

Full Marks : 25

[Use a separate Answer Book for each group]

Group - A

1. Answer **any three** questions : [3×5]
- a) What is meant by sampling fluctuation of a statistic? How is it measured? [2+3]
 - b) Prove that sample proportion is an unbiased estimator of population proportion in SRSWOR. Find standard error of sample proportion in this situation. [2+3]
 - c) Write the advantages of sampling over complete enumeration. [5]
 - d) Write short notes on **any one** of the following topic. [1×5]
 - i) Sampling distribution and standard error.
 - ii) Use of random sampling numbers in drawing simple random sample.

Group - B

2. Answer **any one** question : [1×10]
- a) Write the model for analysis of one-way classified data with K-treatments. How would you calculate different sums of squares and prepare the ANOVA table? How is the significance of treatment effects tested? [2+5+3]
 - b)
 - i) Why would you rather go for one-way ANOVA than doing a number of pair-wise t-tests? [4]
 - ii) Describe 2-way ANOVA with one observation per cell. [6]

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