2021
B.A./B.Sc.
First Semester
GENERIC ELECTIVE – 1
STATISTICS
Course Code: STG 1.11
(Statistical Methods)

PART–B
Total Mark: 30

Answer the following questions.   6×5=30

1. (a) Mention different kinds of statistical investigations.   4
   (b) What are the different sources of primary data?   2

2. (a) Mention the requisites of a good measure of central tendency.   2
   (b) Show that arithmetic mean is affected by change of origin and scale.   4

3. (a) Write down the formulae of rth order raw moments and central moments.   2
   (b) Obtain the relation between central moments and raw moments and find the first four central
       moments in terms of raw moments.   4

4. (a) Two urns contain the following numbers of white and red balls.
       Urn I : 4 white and 6 red balls
       Urn II : 5 white and 5 red balls
       One urn is selected at random and a ball is drawn from it. It happens to be white. What is the
       probability that the ball has come from urn I?   3
   (b) Prove Bayes theorem.   3

5. (a) How are frequencies represented for various combinations of attributes?   3
   (b) Find if A and B are independent, positively associated or negatively associated in the give case:
       (AB) = 256, (αB) =768, (Aβ) = 48 and ($\alpha\beta$) = 144   3

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