Department of Statistics ,Government Degree College Ganderbal

Some Important Instructions

Before writing and preparing your assignments, candidates are required to read the instructions given below carefully. It is mandatory for candidates to strictly adhere to every point so that your assignments will be approved for evaluation without any issue.

1. The date of examination is 07-06-2021 at 10.00am and the scanned copy of assignment can be accepted up to 1:00 pm on the same day through Email-address given below.
2. Students are required to write down their Roll No, Name, Registration No, Semester and page numbering, on top of each page.
3. The assignments must be hand written on A4 size ruled paper with not more than 10 pages.
4. Students are required to convert their hand written assignment into a single pdf file by using a user friendly cam scanner app.
5. Students are required to scan your hand written assignments clearly, so that the submitted assignments are readable for concerned evaluator.
6. Students are required to submit their scanned copy of assignment through Email: ***3rdsem2021assignment@gmail.com***
7. Do not waste your precious time by simply copying from other students, instead you must use your IQ to prepare your assignments for best results.
8. Students are advised to keep a hard copy of their assignments with them.
9. Students must put their signatures on top of each page.
10. The first page of assignment must only contain the following information:
    a. Name of candidate……..
    b. University Examination Roll No……
    c. Batch……..
    d. Category: Fresh/Backlog……
    e. Registration. No:……
    f. Subject……
    g. Semester…….
    h. Contact No…….
    i. Email address…….
    j. Date of Submission……
    k. Signature of Candidate……
    l. Last but not least students must cross check whether they have followed all the points given in the instructions carefully before the submitting their assignments.

Department of Statistics, Govt. Degree College Ganderbal

Question Paper for BG-4th Semester (Backlog Batch 2015} Session April-May 2021

Subject: Statistics **Time Allotted: 3hours (10:00am-1:00 pm)**
Paper: ST420C: STATISTICS: SAMPLING THEORY
Max. Marks: 60 **Min. Pass Marks: 24**

Note: ***Attempt all questions from Section A, Section B and only Two Questions from Section C. Send pdf /Cam-scanner copy of answer book duly signed by the candidate at E-mail Address: 3rdsem2021assignment@gmail.com within the specified time i.e*** **10:00am-1:00 pm*****. No answer book shall be considered after expiry of time.***

Section: A (very short Answer type questions)

1. What is difference between sample and population?
2. What are Principles of sample survey?
3. Write the expression for Estimation of mean and its Variance in SRS.
4. Define Simple Random Sampling.
5. What are Principles of stratification?
6. What are different methods of allocation used in Stratified random sampling?
7. Write two advantages of Systematic Sampling over Stratified Random Sampling.
8. Compare the mean and variance of Systematic Sampling over SRS.

Section: B (Short Answer type questions)

9. What are advantages of sample survey over census?
10. What are Merits and demerits of Simple Random Sampling?
11. When to use Stratified Random Sampling?
12. What is Systematic Sampling? Write its advantages over Simple Random Sampling.

Section: C (Long Answer type questions)

13. Explain the following terms:
    a. Census and sample survey
    b. Sampling and non-Sampling errors.
14. Consider a finite population of size N=4 including the values of sampling units as (1,2,3,4). Enumerate all possible samples of size n=2 using SRSWR.
    a. Show that sample mean provides an unbiased estimator of population mean.
    b. Show that sample mean square does not provide an unbiased estimator of population mean square.
    c. Compute sampling errors and show that their sum is equal to zero.
15. Explain briefly:
    a. Proportion and Optimum allocation
    b. Comparison of stratified sampling over SRS.
16. Derive the expression for estimation of mean and its variance in systematic sampling.