**ALLAMA IQBAL OPEN UNIVERSITY, ISLAMABAD**

***(Department of Agricultural Sciences)***

**WARNING**

1. **PLAGIARISM OR HIRING OF GHOST WRITER(S) FOR SOLVING THE ASSIGNMENT(S) WILL DEBAR THE STUDENT FROM AWARD OF DEGREE/CERTIFICATE, IF FOUND AT ANY STAGE.**
2. **SUBMITTING ASSIGNMENTS BORROWED OR STOLEN FROM OTHER(S) AS ONE’S OWN WILL BE PENALIZED AS DEFINED IN “AIOU PLAGIARISM POLICY”.**

**ASSIGNMENT No. 1**

**Course: Statistics (794) (Half Credit) Semester: Spring, 2011**

**Level: M.Sc (Hons) Livestock Management Total Marks: 100**

 **Pass Marks: 50**

***Note: Attempt all questions. All carry equal marks.***

Q. 1 a) A small commuter airline owns two jets and has subcontracted in maintenance operations to two separate firms. Samples of monthly down times of these subcontracted follow. At a = 0.05 test the claim that the mean monthly down times of these subcontracted follow. At a = 0.05 test the claim that the mean monthly down times (in hours) of both firms are equal. **(10)**

 b) Scores on NTS entrance examination are distributed with a mean of 500 and standard deviation of 100. One university gives priority acceptance of subjects scoring about 650. What percentage of subjects is eligible for priority acceptance? **(10)**

Q. 2 a) Describe the test of Hypothesis of Population Proportion. **(10)**

 b) A Veterinary pharmaceutical company test manufactures a spray claims that 9 out of 10 veterinary experts recommend that one for cotton test this claim at a = 0.05 against alternative that the actual proportion of experts who do so is less than 90% if a random sample of 100 experts results in 80 who indicate that they recommend that spray. **(10)**

Q. 3 a) A manufacturer uses two different production methods. With the first method, 15 defects are present in a sample of 300 items. With the second method 20 defects are present in a sample of 200 items. If the manager claims that the first method has lower rate of defects at a = 0.01. What conclusion would you draw? **(10)**

 b) Two varieties of wheat are being compared for grain production.50 acres of each variety are planted and grown under similar condition. Variety A yield on the average 87.2 bushels and variety B yielded 78.3 bushels per acre. Assume that the population standard deviation is known to be 6 for both the varieties. Construct a 95% confidence interval for the difference of population means. **(10)**

Q. 4 a) What do you understand by regression model and assumption of simple Linear Model. **(10)**

 b) Explain the least square methods and Scatter Diagram. **(10)**

Q. 5 Define and differentiate between tabular and graphical presentation of data. Variable and data arithmetic mean and weighted mean the range and variable the group data and coefficient of variation. **(20)**

# **ASSIGNMENT No. 2**

**Total Marks: 100 Pass Marks: 50**

Q. 1 a) Differentiate between completes randomized design and randomized complete block design. **(10)**

 b) What are different characteristics of Latin square design? **(10)**

Q. 2 a) What are advantages, uses and disadvantages of factorial experiment. **(10)**

 b) Explain various uses of covariance in CRD. **(10)**

Q. 3 a) Explain with example CRD construction for an adaptive research station. **(10)**

 b) What is difference between CRD and RBD fort statistical analysis? **(10)**

Q. 4 a) How do you measure and control experimental error and what are main sources of experimental error. **(10)**

 b) What are the various factors to be considered for basic experimental design and reasons for experimental design? **(10)**

Q. 5 a) What is the importance of model for covariance. **(10)**

 b) What do you understand by covariance in a complete randomized experiment? Discuss with one example. **(10)**