C.U.SHAH UNIVERSITY

WADHWAN CITY

University (Winter) Examination -2013   **Marks :35**

Course Name : M.Pharm Sem-I   **Subject Name: -Biostatics**

Duration :- 2:00 Hours   **Date : 8/1/2014**

Instructions:-
(1) Attempt all Questions of both sections in same answer book / Supplementary.
(2) Use of Programmable calculator & any other electronic instrument is prohibited.
(3) Instructions written on main answer Book are strictly to be obeyed.
(4) Draw neat diagrams & figures (If necessary) at right places.
(5) Assume suitable & Perfect data if needed.

Q1. Define statistics. Write about functions , applications and limitations of statistics.   (4)

Q2. **(a)** Differentiate between Parallel and crossover designs.   . (5)

(b) What are different Statistical tests for bioequivalence? Explain in brief.   (5)

(c) Give the principles of design for clinical experiment**.**   (4)

OR

(a) In an experiment on immunization of patients from tuberculosis the following result were obtained. Calculate χ^2 and discuss the effect of vaccine in controlling susceptibility to tuberculosis ($\chi^2_{5\%}$=**3.84**)

(5)

	Affected	Not Affected
Inoculated	12	26
Non Inoculated	16	6

(b) Differentiate between superman rank correlation coefficients and persons product coefficients.

(5)

(c) Write the significance and methods for studying the Correlation.   (4)

Q3. Write a shot notes on student t test   (3)

Q4. **(a)** What do you mean by hypothesis? Explain the procedure of testing the hypothesis.   (5)

(b) Write a short note on Multiple regression analysis.   (4)

(c) For a random sample of 12 persons fed on drug A, the increased weight, in pounds in a certain period were: 7,13,22,15,12,14,18,8,21,23,10,17 For another sample of 10 persons, fed on drug B, the increase in the same period were: 10,6,16,17,13,12,8,14,15,9 Test whether the drug A and B differ significantly as regards their effect on increase in weigh. (**t$_{5\%}$=2.09,v=20**)   (5)

OR

(a) Differentiate between 'Descriptive' and 'Inferential' Statistics.   (5)

(b) The below mentioned three samples have been obtained from normal populations with equal variances. Test the hypothesis that the sample means are equal**. (F$_{5\%}$=3.88,v$_1$=2,v$_2$=12)**   (5)

8	7	12
10	5	9
7	10	13
14	9	12
11	9	14

(c) The following table gives the ages in years of 10 husbands and their wives at marriage. Compute the correlation coefficient and test for its significance. **(t$_{5\%}$=2.31,v=8) (4 Marks)**

Husband's age	23	27	28	29	30	31	33	35	36	39
Wife's age	18	22	23	24	25	26	28	29	30	32

*******8***14****