

M. Ph. ASTU

1st Sem.

11/12/13 (Reg)

Total No. of printed pages = 4

PY134103

Roll No. of candidate

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2013

(Odd Semester)

**PHARMACEUTICAL PROJECT
METHODOLOGY AND BIostatISTICS**

Full Marks-100 Pass Marks-35 Time-Three hours

The figures in the margin indicate full marks for the questions.

Answer *eight* questions taking *four* from each section. Question Nos. 1 and 6 are compulsory.

SECTION - A

1. Short questions : $2 \times 7 = 14$

- Explain the meaning of historical research.
- Point out some demerits of academic research.
- Figure out some merits and demerits of personal interview methods.

[Turn over

- (d) Differentiate between survey and experiment.
- (e) Give reasons why the tabulation of data is essential.
- (f) Define the term skewness and kurtosis.
- (g) What do you mean by the term pantry audit ?
2. (a) Discuss the various steps involved in writing a research proposal. 8
- (b) Differentiate between questionnaires and schedules. 4
3. Discuss the term research. Point out the types and objectives of research. What are the motivations in research ? $3+4+5=12$
4. Explain elaborately the various methods of data collection. Explain the characteristic and major phases involved in case study method. Point out the advantages of case study methods. $5+4+3=12$
5. (a) Discuss in detail about the different organization that provides research grants in India.
- (b) Add a note on industry-institute interaction. $7+5=12$

SECTION - B

6. Short questions :

2×7=14

- (a) Brief the meaning and importance of IIPC.
- (b) What do you mean by cost-benefit analysis ?
- (c) What is secondary literature ?
- (d) What is the content of methodology section in a research paper ?
- (e) What is the regression coefficient ?
- (f) Write down the uses of t-test.
- (g) What are the uses of footnote ?

7. (a) Define preclinical and clinical trial. Describe different phases of clinical trial.

(b) Explain the working schedule of contract research organization while performing clinical trial.

7+5=12

8. Compute the correlation coefficient between X and Y :

6

X :	5	3	2	1	4
Y :	6	4	5	6	4

- (b) The following table gives the number of accidents that took place in an industry during various days of the week. Apply chi-square test if the accidents are uniformly distributed over the week : 6

Day :	Mon	Tues	Wed	Thurs	Fri	Sat
No. of accidents :	14	18	12	11	15	14

9. (a) A random sample of size 16 has 53 as its mean. The sum of the squares of the deviation from the mean is 135. Can this sample be regarded as taken from the population having 56 as its mean? 6
- (b) The scores of two batsmen A and B in 10 matches are given below : 6

A	30	44	66	62	60	34	80	46	20	38
B	34	46	70	38	55	48	60	34	45	30

Determine who is more consistent.

10. Discuss in brief the types of different skills possesses by a presenter to deliver an oral presentation. 12