Printed Pages : 4

PH243

(Following Paper ID and Roll No. to be filled in your Answer Book)

PAPER ID : 150403

Roll No.

B. Pharm.

(SEM. IV) THEORY EXAMINATION, 2014-15

PHARMACEUTICAL BIOSTATISTICS

Time : **3** Hours] [Total Marks : **80**

Note : Attempt all questions.

SECTION - A

1 Attempt all parts of this question. Each part carries 2 marks : 2×8=16

(a) What do you mean by cumulative frequency curve ?

(b) Give the relation between mean, median and mode.

(c) Define Kurtosis.

(d) What is the probability of Sunday comes in leap year ?

(e) Write mean and variance of Poisson distribution.

(f) Write regression line x on y.

(g) What is the median of the following data ?
6, 3, 8, 9, 10, 2, 7, 11, 5

(h) What do you mean by random sampling ?

SECTION - B

2 Attempt any four parts of following : 6×4=24

(a) What are the source of collection of primary data and how it is different with secondary data ?

(b) Find the mean deviation of the following data :

Class Interval	0-10	10-20	20-30	30-40	40-50
Frequency	8	12	15	10	15

(c) Fit a straight line y = a + bx of the following data :

x	1	2	3	4	5
y	2	3	5	7	9

(d) Find the student 't' test of sample of eight : –4, –2, –2, 0, 2, 2, 3, 3, taking mean of universe is zero.

(e) A box contain 6 red ball, 4 white and 5 black balls. A person draws 2 white ball at random. Find the probability that ball drawn is white.

(f) Draw a Histogram of the following distribution :

Class Interval	5-10	10-15	15-20	20-25	25-30
Frequency	5	25	6	12	10

SECTION - C

3 Attempt any four parts of the following : 4×10=40

(a) The following figure relate to cost of construction :

Items	Bricks	Steel	Cement	Timber	Labour	Misc.
Expenditure	20%	18%	10%	15%	25%	12%

Draw a pie diagram of above given data.

(b) Calculate coefficient of variance (C.V.) for the following data :

Class Interval	10-15	15-20	20-25	25-30	30-35	35-40
Frequency	8	12	12	18	14	10

(c) The age of the husbands and wives are given below :

Age of husband (x)	23	27	28	29	30
Age of wife (y)	18	22	23	24	25

Calculate the coefficient of correlation between x and y from the above data.

(d) The following table gives the number of aircraft accidents that occurred during various days of week. Test whether the accidents are uniformly distributed over the week :

Days	Mon	Tue	Wed	Thu	Fri	Sat	Total
No. of accidents	14	18	12	11	15	14	84

Given χ^2 = 11.07 for 5 degree of freedom at 5% level of significance.

(e) Fit a Poisson distribution to set of observations.

x	0	1	2	3	4
f	122	60	15	2	1

Given $e^{-0.5} = 0.61$.

(f) What are the application of statistical concepts in pharmaceutical sciences ?