SECTION - C

14. Distinguish between primary and secondary data.

15. Compare and contrast various measures of central tendency.

16. Explain the meaning and significance of the concept of correlation.

17. What is "Analysis of Variance"?

18. What is F-test? Mention two uses of F-test. (5×2=10)

[Total No. of Questions - 18] [Total No. of Printed Pages - 4]
(2124)

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B. Pharmacy 3rd Semester Examination

Pharmaceutical Statistics (NS)

BP-235

Time : 3 Hours **Max. Marks : 70**

The candidates shall limit their answers precisely within the answer-book (40 pages) issued to them and no supplementary/continuation sheet will be issued.

Note : Attempt any two question from Section A and eight questions from Section B. All questions in Section C are compulsory.

SECTION - A

1. Calculate the lower and upper quartiles of the following data:

Central Value:	2.5	7.5	12.5	17.5	22.5
Frequency:	7	18	25	30	20

(10)

2. Calculate Karl Pearson's coefficient of correlation for the following paired data:

X:	28	41	40	38	35	33	40	32	36	33
Y:	23	34	33	34	30	26	28	31	36	38

(10)

3. The equations of two regression lines in a correlation analysis are as follows:

   $3x + 2y = 26$ and $6x + y = 31$

   Find correlation coefficient. (10)

[P.T.O.]

SECTION - B

4. What is regression and correlation? How is regression different from correlation? (5)

5. In a random sample of 500 persons from town A, 200 found to be consumers of wheat. In a sample of 400 from town B, 220 are found to be consumers of wheat. Do these data reveal a significant difference between town A and town B as far as the proportion of wheat consumers is concerned? (5)

6. Find the standard deviation from the following data:

Age under:	10	20	30	40	50	60	70	80
No. of persons dying:	15	30	53	75	100	110	115	125

(5)

7. A simple random sample of size 100 has mean 15, the population variance being 25. Find an interval estimate of the population mean with a confidence level of (i) 99% (ii) 95%. (5)

8. The following data present the yields in quintals of corn on ten subdivisions of equal area of two agricultural plate:

Plate 1:	6.2	5.7	6.5	6.0	6.3	5.8	5.7	6.0	6.0	5.8
Plate 2:	5.6	5.9	5.6	5.7	5.8	5.7	6.0	5.5	5.7	5.5

Test whether two samples taken from two random population have the same variance. (5% point of F for $\nu_1=9$ and $\nu_2=6$ is 3.18) (5)

9. The mean life of sample of 10 electric blubs was found to be 1456 hours with standard deviation of 423 hours. A second sample of 17 blubs chosen from a different batch showed a mean life of 1280 hours with standard deviation of 398 hours. Is there a significant difference between the means of the two branches? (5)

10. Calculate correlation coefficient from the following data:

$N=10$, $\Sigma x=140$, $\Sigma y=150$, $\Sigma(x-10)^2=180$,

$\Sigma(y-15)^2=215$, $\Sigma(x-10)(y-15)=60$ (5)

11. From the following data calculate the missing value when mean is 115.86

Wages (Rs.):	110	112	113	117	—	125	128	130
No. of workers:	25	17	13	15	14	08	06	02

(5)

12. The following table shows the one day expenditure of 80 students of a University.

Expenditure (in Rs.)	No. of students	Expenditure (in Rs.)	No. of students
78-82	2	53-57	13
73-77	6	48-52	9
68-72	7	43-47	7
63-67	12	38-42	4
58-62	18	33-37	2

Calculate the coefficient of variance of the above data. (5)

13. Find Bowley's coefficient of skewness for the following frequency distribution:

No. of Children per family:	0	1	2	3	4	5	6
No. of families:	7	10	16	25	18	11	8

(5)

[P.T.O.]