

[Total No. of Questions - 7] [Total No. of Printed Pages - 2]  
(2123)

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**B. Pharmacy (Ayurveda) 3rd Semester Examination**

**Pharmaceutical Statistics (N.S.)**

**BPA-335**

**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 six questions including question no. 1 which is compulsory. The marks for each question are indicated against it.

1. Attempt all parts:

- (a) Explain inferential statistics.
- (b) What is Lorenz Curve?
- (c) Discuss the types of Kurtosis.
- (d) Define rank correlation coefficient.
- (e) In a negatively skewed data mean, median and mode, which are calculated respectively  $\bar{X} = 25$ , median=28, mode=22. Do you agree? Comment.
- (f) Explain mutually exclusive events.
- (g) Define secondary data.
- (h) Give two assumptions of normal distribution.
- (i) Discuss the chi square test of goodness of fit.
- (j) Define central tendency. **(10×2=20)**

2. Distinguish between:

- (a) Univariate and Bivariate Frequency Distribution.
- (b) Simple and complex statistical tables. **(5+5=10)**

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**[P.T.O.]**

3. Calculate mean and standard deviation from the following data:

Age: (under)	10	20	30	40	50	60
No. of persons:	15	32	51	78	97	109

(10)

4. The daily expenditure of 100 families is given below:

Daily expenditure	0-20	20-40	40-60	60-80	80-100
No. of families	12	?	27	?	16

If mode of distribution is 44. Calculate Karl Pearson coefficient of skewness. (10)

5. The co-efficient of correlation between the ages of husbands and wives in a community was found to be +0.8, the average of husband age was 25 years and that of wives age 22 years. Their standard deviation were 4 and 5 years respectively. Find with the help of regression equations:

(i) the expected age of husband when wife's age is 20 years and

(ii) the expected age of wife when husband's age is 30 years. (10)

6. The following table gives the number of days in a 50 days period during which automobile accidents occurred in a certain part of a city. Fit a Poisson distribution to the data:

No. of accidents	0	1	2	3	4
No. of days	19	18	8	4	1

(10)

7. Three varieties of coal were analysed by four chemists and the ash content in the varieties was found to be as under:

Varieties	Chemists			
	1	2	3	4
A	8	5	5	7
B	7	6	4	4
C	3	6	5	4

Do the varieties differ significantly in their ash content? (10)