

Code No: B2205

R10
SET-1
II B. Pharmacy II Semester Supplementary Examinations, April - 2018
BIOSTATISTICS

Time: 3 hours

Max. Marks: 75

 Answer any **FIVE** Questions
 All Questions carry **Equal** Marks

1. a) Compute the standard deviation and coefficient of variation for the following frequency distribution of wage earners in a factory (8M)

Wages per hour (in Rs.)(X):	9	12	15	18	21	24	27	30
No. of Wage Earners. (f):	20	60	150	250	200	120	50	40

- b) From the following data find out Karl Pearson's coefficient of skewness: (7M)

Measurement:	10	11	12	13	14	15
Frequency:	2	4	10	8	5	1

2. a) A company has two plants to manufacture scooters. Plant I manufactures 80% of the scooters and Plant II manufacture, 20%. At plant I; 85 out of 100 scooters are rated standard quality or better. At Plant II only 65 out of 100 scooters are rated standard quality or better. What is the probability that a scooter selected at random came from plant I if it is known that the scooter is of standard quality? What is the probability the scooter came from plant II if it is known that the scooter is of standard quality? (8M)

- b) Explain Kurtosis and skewness. (7M)

3. a) For the following data, find the regression lines by applying the method of least squares (8M)

X	5	10	15	20	25
Y	20	40	30	60	50

- b) Compute the correlation coefficient and the lines of regression for the data (7M)

X	1	2	3	4	5
Y	2	5	3	8	7

4. a) The pulse rate of a man due to the effect of Amtas AT 25 mg on different days in a month were found to be 66, 65, 69, 70, 69, 71, 70, 63, 64 and 68. Discuss whether the mean pulse rate of the man in the month is 65. (8M)

- b) Explain Bayer's theorem. (7M)

5. a) Explain the designs CRD and RBD of random experiments. (8M)

- b) Explain the process of random sampling. Define (i) Statistic (ii) parameter(iii) write about a test for small samples. (7M)

6. a) Explain the applications of parametric and Non-parametric tests employed in testing of significance in biological/pharmaceutical experiments. (8M)

- b) Write a note on elements of ANOVA. (7M)

7. a) Write the advantages of statistical quality control. (8M)

b) A certain drug was administered to 456 Males out of a total of 720 in a certain locality to test the efficiency against typhoid. The incidence of typhoid is shown below. Find out the effectiveness of drug against the disease. (The table values of chi-square for 1 d.f at 5% level of significance is 3.84) (7M)

	Infection	No Infection	Total
Administering the drug	144	312	456
Without administering the drug	192	72	264
Total	338	384	720

8. a) If a data is given, explain the methods for diagrammatic representation of that data. (8M)

b) Show that for a Binomial distribution, mean is more than its Variance, whereas for Poisson distribution, these two are equal. (7M)