

B.Sc. RESPIRATORY THERAPY
FIRST YEAR
PAPER IV – BIO STATISTICS AND PHYSICS

Q.P. Code: 802604

Time: Three Hours

Maximum : 100 Marks

Answer All questions

I. Elaborate on:

(3 x 10 = 30)

1. Explain regression lines. Obtain the regression equation of X on Y from the following data.

X	2	3	7	8	10
Y	10	9	11	8	12

2. Explain Normal distribution and the application of normal probability curve.
3. Briefly explain the factors affecting oxygenation and ventilation.

II. Write Notes on:

(8 x 5 = 40)

1. Differentiate random and non-random sampling procedure.
2. Find the coefficient of variation for the following data.

C.I	10 – 20	20 – 30	30 – 40	40 – 50	50 – 60	60 – 70
F	10	15	32	40	22	18

3. Calculate the mean, median, mode of the following data.
45, 55, 58, 62, 65, 68, 69, 70, 73, 74, 77, 79, 74, 81, 74, 83, 89, 93, 96, 99.
4. Chi-square test.
5. Scatter diagram.
6. Explain Gas laws.
7. Student's t-test and its application.
8. Discuss the different patterns of flow.

III. Short Answers on:

(10 x 3 = 30)

1. Avogadro number.
2. Different states of matter.
3. Standard deviation.
4. Quartiles.
5. Pie diagram.
6. Median.
7. What is statistical significance?
8. Correlation.
9. Variance.
10. Types of population.
