19. Obtain the regression equations for the following data :

X: 4   5   6   8   11
Y: 12 10 8   7   5

20. On the basis of the following data can it be conclude that smoking and lungailment are independent.

	Lungailment	No Lungailment	Total
Smokers	75	105	180
Non-smokers	25	95	120
Total	100	200	

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SECTION A — (10 × 2 = 20 marks)

Answer ALL questions.

1. What is Bio-statistics?

2. Write any two uses of statistics.

3. Define Median.

4. What is co-efficient of variation?

5. Define correlation.

6. What are the regression equations?

7. Define Tabulation.

8. What is primary data?

9. What is meant by sample?

10. Define simple hypothesis.

SECTION B — (5 × 5 = 25 marks)

Answer ALL questions.

11. (a) Explain the types of data.

Or

(b) What are the limitations of statistics?

12. (a) Explain the classification of data.

Or

(b) What are the parts of Tabulation?

13. (a) What are the merits and demerits of Mode?

Or

(b) Calculate mean deviation from the following data :

240, 238, 236, 245, 242, 248, 237

14. (a) Explain the types of correlation.

Or

(b) Calculate rank correlation of co-efficient for the following data :

X: 24 27 31 32 20 25 33 30 28 22
Y: 11 8 5 3 13 10 2 7 9 4

15. (a) Explain the simple random sample.

Or

(b) The systolic blood pressure of 10 persons in the age group of 45-50 is given below.

149, 142, 124, 140, 150, 145, 147, 127, 148, 128

Test whether, the average blood pressure of the population is 150.

SECTION C — (3 × 10 = 30 marks)

Answer any THREE questions.

16. Discuss about the sources of data in life science.

17. Explain the methods of collection of data.

18. Calculate the mean, median and mode from the following data :

Class intervals :	0-10	10-20	20-30	30-40	40-50	50-60
Frequency :	12	18	27	20	17	6