

Part B**5 X 6=30****Answer the following
Answer should not exceed 400 words or two pages**

11.a. Explain mutually exclusive events

(or)

11.b. A bag contains 30 balls numbered from 1 to 30. One ball is drawn at random. Find the probability that the ball drawn will be having the number multiple of 3 or 7.

12.a. Explain dependent and independent events.

(or)

12.b. A class consists of 80 students, 25 of them are girls and 55 boys, 10 of them are rich and remaining poor, 20 of fair complexioned. What is the probability of selecting a fair complexioned rich girl?

13.a. What are the methods available to collect primary data?

(or)

13. b. Explain the types of Tables.

14.a. Find the median from the following data

4100, 4150, 6080, 7020, 5200, 7120, 4300, 6160, 7400

(or)

14.b. Find the mode for the following data

5110, 6120, 7130, 6120, 5110, 8140, 7130, 6120, 7130, 8140

15.a. Calculate Quartile deviation from blood serum cholesterol levels of 10 persons

240, 260, 290, 245, 255, 288, 272, 263, 277, 251

(or)

15.b. Find the mean deviation from the following data

20, 28, 40, 12, 30, 15, 50, 55, 10, 60

Part C**5 x 12=60****Answer the following
Answer should not exceed 800 words or four pages**

16.a. State and prove addition theorem of probability.

(or)

16. b. A problem in Statistics is given to five students A, B, C, D and E. Their chances of solving it are $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$, $\frac{1}{5}$, and $\frac{1}{6}$. What is the probability that the problem will be solved?

17.a. State and prove multiplication theorem of probability.

(or)

17.b. State and prove Baye's theorem.

18.a. Discuss in detail about the sources of collection of secondary data.

(or)

18.b. Discuss the different types of bar diagrams.

19.a. Determine arithmetic mean from the following data

Marks :	0-10	10-20	20-30	30-40	40-50
No, of Students :	7	15	24	16	8

(or)

19.b. From the following data compute the value of Harmonic mean

Class:	10-20	20-30	30-40	40-50	50-60
Frequency:	4	6	10	7	3

20.a. Calculate standard deviation from the following data

Age :	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80
No. of persons:	15	15	23	22	25	10	5	10

(or)

20. b. From the table given below

	Factory A	Factory B
Number of employees	100	150
Average wage per employee	3200	2800
Variance of wage per employee	625	729

Determine which factory has great variation in distribution of wage per employee.
