

In 2018, out of 2000 workers in a factory, 1550 were members of a union. The number of female workers employed was 250, out of which 200 did not belong to any union. In 2019, the number of union workers was 1725 of which 1600 were male. The number of non-union workers was 380, among whom 155 were female.

18. Calculate mean, median and mode of the following data given below:

CI	30-35	35-40	40-45	45-50	50-55	55-60	60-65	65-70
F	12	18	22	27	17	23	29	8

19. There are 9 boys and 9 girls in a class. The heights are given below;

Boys (Cms)	170	175	165	162	168	170	172	163	161
Girls (Cms)	152	165	155	161	168	160	155	154	152

Calculate variance of height for boys and girls separately.

20. From the following distribution. Calculate (a) First four moments about the mean (b) Skewness based on moments and (c) Kurtosis.

CI	0-10	10-20	20-30	30-40
f	1	3	4	2

S.No. 5677

16 SACBS 1

(For candidates admitted from 2016-2017 onwards)

B.Sc. DEGREE EXAMINATION, APRIL 2022

Part III – Allied

BIOSTATISTICS

Time : Three hours

Maximum : 75 marks

PART A — (10 × 2 = 20)

Answer ALL the questions.

1. "Statistics is the Science of Counting" - Comment.
2. Recall the various Statistical methods used in biological studies.
3. What is meant by Sampling Design?
4. Mention the merits of pie diagram.
5. Find the median height of plants in a plot with cms of 31, 35, 27, 29, 32, 43, 37, 41, 34, 28, 36, 44, 45, 42 and 30.
6. Define Harmonic Mean.
7. State the different measures of dispersion.
8. In a series of boys, the mean systolic blood pressure was 120 mmHg and S.D was 10. In the same series the mean height and S.D were 160 and 5 cm respectively. Find which character shows greater variation.

9. Bring out definition of kurtosis.
10. A distribution had $Q_1 = 31.3$, Median = 35 and $Q_3 = 36.4$. Calculate the coefficient of Skewness.

PART B — ($5 \times 5 = 25$)

Answer ALL questions, choosing either (a) or (b).

11. (a) Delineate about Biostatistics. Bring out the characteristics of BioStatistics.

Or

- (b) Elaborate the applications and uses of BioStatistics.

12. (a) What is sampling? Discuss the various types of sampling methods

Or

- (b) Draw a pie diagram to represent the following data with construction procedure.

Ocean	Pacific	Atlantic	Indian	Antarctic	Arctic
Area(million sq.km)	70.8	41.2	28.5	7.6	4.8

13. (a) Calculate the Arithmetic mean of the following data.

Height	60-62	63-65	66-68	69-71	72-74
No. of student	15	54	126	81	24

Or

- (b) Write merits and demerits of Geometric Mean. Calculate GM for the data

50, 72, 54, 82, 93.

14. (a) Find the mean and standard deviation of the following data:

Size	10	11	12	13	14	15	16
Freq.	2	7	11	15	10	4	1

Or

- (b) Explain in detail about measures of dispersion. State the requisites of good measures of dispersion.

15. (a) Write short notes of moments of distribution.

Or

- (b) For a moderately skewed data, the mean is 200, the coefficient of variation is 8 and Karl Pearson's coefficient of skewness. Find the mode and median.

PART C — ($3 \times 10 = 30$)

Answer any THREE questions.

16. Explain in detail about the scope and functions of Statistical methods with illustration.

17. Write short note on Classification and Tabulation with its advantages in this data world. Present the following information in a suitable tabular form, supplying the figures not directly given.