SAINTGITS COLLEGE OF APPLIED SCIENCES
PG DEPARTMENT OF COMMERCE
QUESTION BANK
Semester III

Quantitative Techniques for Business I

Section A

1. What is quantitative Techniques?
2. Define Statistics.
3. What is Geometric Mean?
4. What is Harmonic mean?
5. Define Mean
6. Find the mean of 8, 5, 7, 10, 15, 21
7. Find the median of the set of numbers: 1,2,3,4,5,6,7,8,9 and 10.
8. The following numbers represent the ages of people on a bus: 3, 6, 27, 13, 6, 8, 12, 20, 5, 10. Calculate the mean of their ages.
9. What is a combined mean?
10. Give 2 examples of positional average?
11. What do you mean by positional average?
12. Define mode.
13. Explain mode as positional average.
14. Define coefficient of variation.
15. What do you mean by variance
16. Find the harmonic mean of 15, 30, and 45.
17. Define Geometric Mean.
18. Ascertain the value of median if mean is 30 and mode is 28
19. What are the uses of the weighted average method?
20. Define Statistics in plural sense and singular sense.
21. The mean weight of 150 students in a class is 60kgs. The mean weight of boys and girls is 70 and 55kgs respectively. Find the number of boys and girls in the class.

22. What are the reasons for distrust of statistics?
23. Calculate the harmonic mean from the following: 10, 20, 30, 40, 50
24. Give any one example of inclusive, exclusive and open-ended series
25. Find Q_3 from the following series: 10, 12, 27, 18, 8, 20
26. Calculate arithmetic mean: 30, 40, 50, 60, 70, 80 ,50, 70, 90, 50
27. Define Dispersion.
28. Define Mean Deviation.
29. Define Standard Deviation.
30. Why is Standard deviation considered as a better measure of dispersion than mean deviation?
31. What is skewness?
32. What is positive skewness?
33. What is negative skewness?
34. Define moments.
35. Explain the uses of moments.
36. Define kurtosis.
37. Explain Kelly's measure of skewness.
38. What do you mean by interpolation?
39. What is Extrapolation?
40. What is Newton's formula of advancing differences?
41. What is a statistical survey?
42. What do you mean by statistical units?
43. What is primary data?
44. What do you mean by questionnaire?
45. What do you mean by census method of data collection?
46. What do you mean by indirect oral investigation?
47. What is secondary data?
48. What are the sources of secondary data?
49. What is sampling?
50. What do you mean by sample design?
51. What do you mean by sampling errors?
52. What is probability sampling?
53. What do you mean by coding?
54. What is tabulation?
55. What is cross tabulation?

56. What is an absolute measure of dispersion?

Section B

57. Explain the characteristics of statistics? (CO1)

58. Estimate the mean, median and mode for the following list of values: (CO3)

13, 18, 13, 14, 13, 16, 14, 21, 13

59. The table given below represents the frequency-distribution of ages for Standard 1st students.

Ages	4	5	6	7
Number of Students	6	4	10	8

Measure the Harmonic Mean of the given class. (CO3)

60. Given the following frequency distribution, evaluate the arithmetic mean

Marks :	64	63	62	61	60	59
Number of Students :	8	18	12	9	7	6

(CO3)

61. The following data pertains to the number of members in a family. Solve for the median size of the family.

Number of members x	1	2	3	4	5	6	7	8	9	10	11	12
Frequency	1	3	5	6	10	13	9	5	3	2	2	1

(CO3)

62. Find the Geometric mean for the following

Weight of sorghum (x)	No. of ear head(f)
50	4

65	6
75	16
80	8
95	7
100	4

63. The marks secured by some students of a class are given below. Determine the harmonic mean.

Marks	20	21	22	23	24	25
Number of Students	4	2	7	1	3	1	(CO3)

64. Find the missing frequency if mean is 28. Also find median.

Marks	0-10	10-20	20-30	30-40	40-50	50-60
No: of students	12	18	27	?	17	6

65. Discuss the essential characteristics of an ideal average. (CO3)

66. Mean and standard deviation of 100 items was found to be 60 and 5 respectively. Later on it was discovered that a correct item 50 was wrongly copied as 30. Find the correct mean and standard deviation.

67. Calculate mean deviation from mean and its coefficient:

Age (above)	0	10	20	30	40	50	60	70
No: of patients	200	180	150	100	50	30	10	0

68 .Population of India has increased by 35% in the first decade, 45% in the second decade and 50% in the third decade. What is the average rate of increase in population.

69. Explain with example how median can be located graphically.

70. Arithmetic mean of 100 items is 50. At the time of calculation one item was misread as 78 instead of 87. Identify the correct mean. (CO3)

71. Discuss the merits and demerits of Arithmetic Average. (CO3)

72. Find the missing frequency from the following

Marks:	0-5	5-10	10-15	15-20	20-25	25-30	30-35
No of students:	10	12	16	?	14	10	8

The average mark is 16.82.

73. The average marks of 25 students was calculated to be 75. Later, it was discovered that the mark of one student was misread as 79 instead of 97. Determine the correct average. (CO3)

74. If a sample size of 22 items has a mean of 15 and another sample size of 18 items has a mean of 20, what is the mean of the combined sample.

75. What are the characteristics of skewness?

76. Distinguish between skewness and dispersion.

77. Explain.how moments are used to measure skewness and kurtosis.

78. Explain the types of skewness.

79. Explain raw moments and central moments and how raw moments can be converted into central moments.

80. What are the conditions to be satisfied by a statistical unit?

81. List out the differences between questionnaire and schedule.

82. What are the essentials of a good sample?

83.Differentiate probaiilty and non -probability sampling.

84. What are the merits and demerits of stratified random sampling?

85. What are the parts of a good statistical table?

86. What are the essential qualities of a good questionnaire?

87. What are the merits and demerits of mode?

88. Explain the method of calculating the value of mode graphically?

89. Explain the empirical relation between mean, median and mode.

90. What is classification? What are the objectives of classification?

Section C

91. Discuss the functions and limitations of statistics   (CO1)

92. 'Statistics are like clay of which you can make God or devil'. Critically examine the given statement.

(CO1)

93. For the following frequency distribution find the (i) Mean (ii) Median (iii) Mode (iv) Harmonic mean (iv) Geometric mean

Weight of earheads in gms	No. of earhead
40 - 60	6
60 - 80	8
80 – 100	35
100 -120	55
120 -140	30
140 – 160	15
160 – 180	12
180 – 200	9

94. The yield of wheat and rice per acre for 10 districts of a state is as under:

District	1	2	3	4	5	6	7	8	9	10

Wheat	12	10	15	19	21	16	18	9	25	10
Rice	22	29	12	23	18	15	12	34	18	12

Calculate for each crop,

(i) Range

(ii) Q.D.

(iii) Mean Deviation about Mean

(iv) Mean Deviation about Median

(v) Standard Deviation

(vi) Which crop has greater variation?

95. Determine arithmetic mean from the following: (CO3)

Value	Less than 10	Less than 20	Less than 30	Less than 40
frequency	4	16	40	76

Less than 50	Less than 60	Less than 70	Less than 80
96	112	120	125

96. Find out the number of students securing B grade in the university examination from the following:

Marks out of 100	0-20	20-40	40-60	60-80	80-100
No: of students	5	26	85	54	30

48% and above but less than 60% marks makes B grade.

97.Locate median. If 60% of students pass the test, find the minimum marks obtained by a pass candidate.

Marks: 0-10   10-20   20-30   30-40   40-50   50-60

No of students: 4   6   20   10   7   3

99. Determine mean from the following: (CO3)

Marks: More than 0   More than 10   More than 20   More than 30   More than 40

No of students: 120   80   60   45   30

More than 50   More than 60   More than 70   More than 80

15   10   8   2

100. Estimate Median and Mode for the following distribution: (CO3)

Class	0-5	5-10	10-15	15-20	20-25	25-30
Frequency	2	6	18	12	14	10

101. Measure Arithmetic Mean from the following: (CO3)

Bonus(Above)	0	10	20	30	40	50	60	70	80	90
No. of Workers	120	80	60	45	30	15	10	8	2	0

102. What are the different stages of a statistical survey?

103. What are the different methods of collecting primary data?

104. Explain the various methods of sampling.

105. What do you mean by sampling? What are its advantages and disadvantages?

106. The scores of two batsmen Lara and Sachin in 10 innings during a certain season are as follows:

Sachin: 30, 90 ,70, 60 ,40, 120, 20 ,5, 3, 40

Lara: 60, 80, 100 ,50, 70, 30, 180, 60, 90 ,75

Who is a better run-getter? Who is more consistent?

107. Particulars regarding the income of two towns are given below:

	Town A	Town B
Number of people	600	500
Average income	175	186
variance	100	81

1. In which town is the variation in income greater?

2. Which town mobilises larger amount as income?

3. What is the combined standard deviation of the two towns put together

108. Following are the marks obtained by 492 candidates in an examination.

Marks	No: of students
Not more than 40	210
" 45	253
" 50	307
" 55	381
" 60	413
" 65	492

Find out the number of candidates : a) who secured more than 48 marks but not more than 50 marks.

b) less than 48 marks but not less than 45 marks.

109. The following are the marks obtained by two students, Ram and Shyam, in 10 unit tests. Find out (1) Who is more intelligent and (2) Who is more consistent?

Ram	44	80	76	48	52	72	68	56	60	54
Shyam	48	75	54	60	63	69	72	54	57	66

110. Explain the different methods of collecting primary and secondary data.