MBA 1st Semester Examination, 2019

QUANTITATIVE TECHNIQUES

PAPER – MBA-103

Full Marks : 100

Time : 3 hours

The figures in the right hand margin indicate marks

Candidates are required to give their answers in their own words as far as practicable

Illustrate the answers wherever necessary

GROUP – A

Answer any **eight** questions : 2×8

1. What is the meaning of statistics ?
2. Mention any two limitations of statistics.
3. Write the relational formula concerning to AM, GM and HM.
4. State the limitations of statistics.

5. Distinguish between SD and CV.

6. What is primary data ?

7. Distinguish between primary data and secondary data.

8. Find the median of the following marks obtained by 7 students :

   4, 12, 7, 9, 14, 17, 16

9. State the relationship between mode, median and mean.

10. Define correlation and state its concept.

11. What is price index ? Why it is used ?

12. What is the full form of AICPI ?

GROUP – B

Answer any **eight** questions : 4×8

13. Explain panel data structure.

14. How can we present statistical information ?

15. State various types of skewness.

16. Enumerate different steps of statistical investigation.

17. Define secondary data and state the chief sources of secondary data.

18. Determine arithmatic mean of salaries of the employees, as shown in table below :

Salaries of employees

Employee No.	1	2	3	4	5	6	7
Monthly salary (Rs.)	12,000	14,500	8,500	13,500	13,500	17,500	11,500

19. Write down the methods of primary data collection.

20. Establish the relation between correlation and regression coefficients.

21. Mention the characteristics of a normal curve.

22. Discuss the additive theorem of probability.

23. Briefly state the concept and use of Rank Correlation.

24. Following are the ranks of marks obtained by 8 students in Economics and Mathematics. Find the rank correlation.

Economics	2	1	4	5	3	7	6	8
Mathematics	1	3	2	7	5	6	8	4

GROUP – C

Answer any **four** questions : 8×4

25. Find the mean and S.D of 'n' natural numbers. 8

26. From the following information, determine in which firm, A or B, there is greater variability in individual wages 8

	Firm A	Firm B
Average monthly wages	Rs. 50	Rs. 45
Variance of distribution of wages	100	121

(*Continued*)

27. Define mode. The distribution of annual revenues of 100 firms in a district is presented in table below. Find the mode of the annual revenue of the firms : 2 + 6

Distribution of annual revenues

Annual Revenue (in crores of Rs.)	Number of firms	Annual Revenue (in crores of Rs.)	Number of firms
less than 2	10	10-12	5
2 - 4	15	12-14	4
4 - 6	20	14-16	3
6 - 8	30	More than 16	5
8 - 10	8		

28. Define regression. Why there are two regression lines ? State what are coefficients of regression. 2 + 4 + 2

29. Fit a least square line to the data in the following table using x as the independent variable : 8

x	3	5	6	8	9	11
y	2	3	4	6	5	8

30. The overall percentage of failures in a certain examination is 40. What is the probability that out of a group of 6 candidates at least 4 passed the examination ? 8

[*Internal Assessment* – 20 Marks]