MAY 2025 **P/ID 77926/RMB1B**

Time : Three hours Maximum : 80 marks

PART A — (10 × 2 = 20 marks)

Answer any TEN questions in 50 words each.

1. State Baye's theorem.
2. Define Integration.
3. What is average cost?
4. Explain uncertainty.
5. Define population.
6. State the importance of research.
7. What do you understand by producer surplus'?
8. What is coding in research?
9. Why editing is needed?
10. Present the need for report.
11. Define Variance
12. What is conjoint analysis'?

PART B — (5 × 6 = 30 marks)

Answer any FIVE questions in 250 words each.

13. Explain the ways Hurwitz and Laplace criteria are used in business decision making.

14. Elucidate the rules of normal and binomial distribution.

15. Discuss the applications of differentiation in managerial decision making.

16. Discuss the points to be noted while designing a questionnaire.

17. With examples. explain the method of interpreting ANOVA result.

18. Discuss the application of Multidimensional Scaling in solving marketing related problems.

19. Give a detailed note on ethics in research.

PART C — (3 × 10 = 30 marks)

Answer any THREE questions in 500 words each.

20. Some parents of the West Bay little leaguers think that they are noticing a pattern. There seems to be a relationship between the number on the kids' jerseys and their position. These parents decide to record what they see. The hypothetical data appear below. Conduct a Chi Square test to determine if the parents' suspicion that there is a relationship between jersey number and position is right. Report your Chi-Square and *p* values.

	Infield	Outfield	Pitcher	Total
0-9	12	5	5	22
10-19	5	10	2	17
20+	4	4	7	15
Total	21	19	14	54

21. Explain the objectives of research design and discuss different types of research designs.

22. Elucidate the applications of binomial, Poisson and normal distributions in business and industrial problems.

23. How differentiation and integration calculus are used in decision making? Explain.

24. Explain different types of reports, and discuss the contents of a good report.

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