

ADMISSION NUMBER											

School of Business
Bachelor of Business Administration
Semester End Examination - Jun 2024

Duration : 180 Minutes
Max Marks : 100

Sem IV - D1UA416T - D1UA401B Research Methodology

General Instructions

Answer to the specific question asked

Draw neat, labelled diagrams wherever necessary

Approved data hand books are allowed subject to verification by the Invigilator

- 1) Define primary research and provide examples. K3 (3)
- 2) Assess the significance of research findings for informing business decisions and assess the types of research design in this case? K4 (4)
- 3) A company wants to understand the relationship between advertising expenditure and sales revenue. They collected data from the past six months, recording the amount spent on advertising (in dollars) and the corresponding sales revenue (in thousands of dollars).
How can regression analysis help the company in this scenario K3 (6)
- 4) Imagine you're a market analyst for a technology company that is considering launching a new line of smart home devices. Your task is to develop a set of good research questions to guide a comprehensive market research study that will inform the company's product development and marketing strategies. What are the characteristics of a good research question? K6 (6)
- 5) A company wants to investigate the impact of two factors, advertising channel and promotion type, on sales revenue. The company runs advertisements through two channels: online and traditional media. Additionally, there are two types of promotions: discount coupons and buy-one-get-one-free (BOGO) offers.
The company collected sales data (in dollars) for a sample of days under different combinations of advertising channels and promotion types. Online Traditional Discount \$1000, \$1100 \$1050, \$1150 BOGO \$1200, \$1300 \$1250, \$1350 K6 (6)

Using these data, perform a two-way ANOVA to analyse the effects of advertising channel and promotion type on sales revenue(4marks) and

explain what are the null and alternative hypotheses for the two-way ANOVA?(4 Marks)

- 6) A company wants to compare the performance scores of employees across three different departments to determine if there is a significant difference in performance levels. Performance scores of employees in three departments (scores are out of 100): Department A: 85,90,88,92,87, Department B: 80,82,85,78,84, Department C: 88,85,90,86,89. K4 (8)
1. Perform one way ANOVA (4 Marks)
 2. Interpret the result for the business managers. (4 Marks)
- 7) A small retail store wants to compare the median sales of two different marketing strategies over a week. They collected sales data (in dollars) for each strategy as follows: K3 (9)
 Strategy A: \$150, \$200, \$180, \$190, \$160, Strategy B: \$170, \$175, \$185, \$195, \$210
- 1) Perform a non-parametric test to determine if there is a significant difference in the median sales between the two strategies
 - 2) Interpret the result.
- 8) A significance is considering changing its menu by introducing healthier options. Currently, the average revenue per customer is \$20, with a standard deviation of \$5. The restaurant estimates that by introducing healthier options, the average revenue per customer could increase by \$2.50. K3 (9)
 Find out the business profit (5 marks) and 80 are within this case. How do you solve it
- 9) Assume that you are a business manager with 5000 customers. Recently it is observed that the customers are going out of the business. As a manager in order to identify the causes of loss of customers you are decided to go for market research. Due to the difficulty of meeting all the customers it is decided to go for samples and collect data. If you want 95 percent accuracy and 5 percent error chance in research find out the sample size desirable to this case(6 marks) and justify the size of the sample?(4 marks) K5 (10)
- 10) You're conducting a survey to estimate the proportion of smartphone users in a city. You want to be 95% confident that your sample proportion will be within 3 percentage points of the true proportion. K4 (12)
 (a) Calculate the sample size. (6 Marks)
 (b) Also compare the sampling and non-sampling errors. (6 Marks).
- 11) A pharmaceutical company wants to evaluate the effectiveness of a new drug on patient recovery time. They collected data on the dosage administered (in milligrams) and recovery time (in days) for a sample of patients. After performing a regression analysis, they obtained the equation: Recovery Time = 5 + 0.3 * Dosage. K6 (12)
1. Evaluate the regression coefficients and discuss whether the dosage has a significant impact on recovery time(6marks)
 2. Evaluate the relevance of research questions in addressing current business challenges(6Marks)?
- 12) 1. Discuss the importance of consumer segmentation in the case of UVW Fashion's declining sales, and how the company could have used this approach to tailor their marketing strategies. (6 Marks) K5 (15)
 2.Critically assess the validity of conclusions drawn from research findings.(4 marks)
 3.suggest the role of managers in improving the business performances? (5 marks)