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UPES
End Semester Examination, December 2024

Course: Research Methodology & Report Writing
Program: BBA/B.Com ALL
Course Code: DSRM 2001

Semester: III
Time: 03 hrs.
Max. Marks: 100

SECTION A
10Qx2M=20Marks

S. No.		Marks	CO
1	Which of the following is a secondary data source? A. Direct surveys conducted with customers about their preferences. B. Government publications such as census reports. C. Observing consumer behavior in a store. D. Conducting interviews with industry experts.	2	CO1
2	Which of these is not a method of data collection. A. Questionnaires B. Interviews C. Experiments D. Observations	2	CO1
3	Which of the following is an example of ordinal scale measurement? A. Weight of individuals B. Rating satisfaction on a scale from 1 to 5 C. Gender classification (Male/Female) D. Temperature measured in Celsius	2	CO1
4	A company wants to understand the relationship between customer satisfaction and repeat purchase behavior for its online store. They collect data from previous customers to determine if higher satisfaction leads to increased repeat purchases. What type of research is this? A. Descriptive B. Causal C. Exploratory D. Longitudinal	2	CO1

5	<p>A researcher is studying customer feedback on a new product by conducting in-depth interviews to understand their perceptions and feelings. What type of research method is being used?</p> <p>A. Qualitative B. Quantitative C. Experimental D. Causal</p>	2	CO1
6.	<p>Which of the following best describes a descriptive research design?</p> <p>A. It aims to establish cause-and-effect relationships between variables. B. It seeks to gather preliminary insights for future, more in-depth studies. C. It focuses on systematically describing characteristics of a specific group or phenomenon. D. It involves manipulating variables under controlled conditions.</p>	2	CO1
7.	<p>A researcher divides the population of college students into groups based on their major (e.g., Business, Engineering, Arts) and then selects a random sample from each group. What type of sampling technique is this?</p> <p>A. Cluster Sampling B. Stratified Sampling C. Convenience Sampling D. Snowball Sampling</p>	2	CO1
8	<p>In hypothesis testing, if a researcher commits a Type I error, what does it imply?</p> <p>A. The null hypothesis is incorrectly accepted when it is false B. The null hypothesis is incorrectly rejected when it is true C. The alternative hypothesis is incorrectly accepted when it is false D. The sample size was too small to make a conclusion</p>	2	CO1
9	<p>Which of the following is a key difference between an independent t-test and a paired t-test?</p> <p>A. An independent t-test is used when comparing two related samples, while a paired t-test is for unrelated samples B. An independent t-test requires normally distributed data, but a paired t-test does not</p>	2	CO1

	<p>C. An independent t-test compares the means of two unrelated groups, while a paired t-test compares means from the same group at different times</p> <p>D. An independent t-test is used for qualitative data, while a paired t-test is for quantitative data</p>		
10	<p>In a research report, which section typically presents the background information, objectives, and significance of the study?</p> <p>A. Methodology B. Literature Review C. Introduction D. Results</p>	2	CO1
<p>SECTION B 4Qx5M= 20 Marks</p>			
11	Distinguish between (i) sampling, and (ii) non-sampling errors with examples.	5	CO2
12	Why is conducting pilot study important in the research process.	5	CO2
13	How does qualitative research contribute to Business decision making?	5	CO2
14	What is the significance of the Delphi technique in data collection for business research?	5	CO2
<p>SECTION-C 3Qx10M=30 Marks</p>			
<p>Attempt ANY THREE</p>			
15	What are the key steps in the research process, and how would you apply them to a study investigating the effects of social media on adolescent mental health? Explain each step in detail.	10	CO3
16	<p>A company compares the average productivity of two different teams, A and B, over a period of 6 months. The following data is collected:</p> <ul style="list-style-type: none"> • Team A: Sample size =10, Sample mean = 120 units, Sample standard deviation = 15 • Team B: Sample size = 12, Sample mean = 110 units, Sample standard deviation = 12 <p>Test whether there is a significant difference in productivity between the two teams at a 0.05 significance level. The critical t-value for 20 degrees of freedom (approximated) is 2.086.</p>	10	CO3
17	<p>A retail company wants to study customer satisfaction and buying behavior in its stores across different regions. The company collects data from different sources:</p> <ol style="list-style-type: none"> 1. Customer Satisfaction Survey: Customers rate their satisfaction from 1 to 10 and choose their favorite product category. 	10	CO3

	<p>2. Purchase History: The company looks at how much each customer spends on average per month and how often they visit the store in the last year.</p> <p>3. Demographic Survey: Customers share their age group, gender, and household income.</p> <p>Identify and explain the types of data collected in this study based on their measurement scales (nominal, ordinal, interval, or ratio) and whether the data comes from primary or secondary sources.</p>		
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18	<p>A researcher wants to compare the variability in the test scores of two different groups of students to determine which group is more consistent in their performance. Group A has test scores of [80, 85, 90, 95, 100], and Group B has test scores of [70, 75, 80, 85, 90]. Which measure of dispersion should the researcher use to compare the variability (or consistency) of the two groups? Find your result and interpret your findings.</p>	10	CO3
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SECTION-D
2Qx15M= 30 Marks

19	<p>A researcher wants to determine if there is an association between smoking and the incidence of cancer. A random sample of 1500 individuals is surveyed, and the following data is collected:</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Category</th> <th>Diagnosed as Cancer</th> <th>Without Cancer</th> </tr> </thead> <tbody> <tr> <td>Smokers</td> <td>400</td> <td>300</td> </tr> <tr> <td>Non-Smokers</td> <td>300</td> <td>500</td> </tr> </tbody> </table> <p>Test the assumption at 5% significance level. The critical value of χ^2 at 1 d.f. is 3.841. Based on your analysis, what would be your recommendations for public health policy makers?</p>	Category	Diagnosed as Cancer	Without Cancer	Smokers	400	300	Non-Smokers	300	500	15	CO4
Category	Diagnosed as Cancer	Without Cancer										
Smokers	400	300										
Non-Smokers	300	500										

20	<p>A business consulting firm has been hired by a sustainable product manufacturer to conduct a research study aimed at understanding consumer preferences for eco-friendly products in a specific market. The manufacturer’s goal is to use the insights gained from this study to guide product development and design effective marketing strategies that resonate with environmentally conscious consumers.</p> <p>The consulting firm aims to uncover the following:</p> <ul style="list-style-type: none"> • Consumer perceptions of eco-friendly products • Key factors influencing purchase decisions, such as product quality, sustainability claims, and price sensitivity 	15	CO4
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	<ul style="list-style-type: none"> • Willingness to pay a premium for sustainable and eco-friendly features <p>To gain deep insights into consumer attitudes and preferences, the firm gathers data by engaging with a carefully selected group of participants who share common characteristics relevant to the study. The firm facilitates interactive discussions to explore consumer motivations, barriers to purchasing eco-friendly products, and expectations for sustainability in product offerings.</p> <ol style="list-style-type: none"> 1. Identify the most suitable type of research for this business study. Justify your choice and explain how it will help achieve the client's goals. 2. Identify the data collection technique used in this study. Explain why this technique is appropriate for understanding consumer preferences for eco-friendly products and how it helps achieve the research objectives. 3. Suggest suitable sampling techniques for selecting participants for this data collection method. Explain your choice and how it ensures the data gathered is relevant and valuable for the client's business objectives. 		
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