

Name:

Enrolment No:

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, May 2023

Course: Business Research Methods

Program: MBA (All)

Course Code: DSRM7002

Semester: II

Time: 03 hrs.

Max. Marks: 100

SECTION A
10Qx2M=20Marks

1.	Select correct answer	Marks	CO
	<p>(i) A questionnaire that offers no scope for respondent's own view is called?</p> <p>a) Close Ended b) Open Ended c) Schedule d) Unstructured</p>	2	CO1
	<p>(ii) ____ research is a fact-finding investigation.</p> <p>a) Formulative b) Causal c) Descriptive d) Experimental</p>	2	CO1
	<p>(iii) Sampling Frame is the term used for which of the following?</p> <p>a) List of Random Numbers b) List of Voters c) List of all the units of the population d) None of the above</p>	2	CO1
	<p>(iv) The probability of type second error is.</p> <p>a) α b) $1 - \alpha$ c) β d) $1 - \beta$</p>	2	CO1
	<p>(v) Consider a hypothesis H_0 where $\mu_0 = 8$ against H_1 where $\mu_1 < 8$. The test is.</p> <p>a) Left tailed. b) Centre tailed. c) Cross tailed. d) Right tailed.</p>	2	CO1

	<p>(vi) Business research means the discovery of new knowledge in the field of</p> <p>a) Management b) Administration c) Business d) None of these</p>	2	CO1
	<p>(vii) Brand Name is an example of which scale of data</p> <p>a) Ordinal b) Nominal c) Ratio d) Interval</p>	2	CO1
	<p>(viii) ____ is regarded as reasoning from the general to particular.</p> <p>a) Induction b) Deduction c) Rational d) None</p>	2	CO1
	<p>(ix) Which of the following is NOT a purpose of a bibliography in a research report?</p> <p>a) To give credit to sources used in the research. b) To provide additional reading material for readers interested in the topic. c) To show the breadth and depth of research conducted on the topic. d) To provide a summary of the main findings of the research</p>	2	CO1
	<p>(x) Which type of research is focused on solving real-world problems in business?</p> <p>a) Basic research b) Exploratory research c) Applied research. d) Experimental research</p>	2	CO1
SECTION B			
4Qx5M= 20 Marks			
2.	Write short note of the Following		
	<p>(a) What is a questionnaire? Can it be used in all situations? Why /why not? Support your answer with suitable examples.</p>	4Qx5M	CO2

(b) What do you mean by hypothesis? How will you decide null hypothesis? Explain with example.

(c) What is a research problem? How do you select a research problem and establish research objective(s)?

(d) A company wants to estimate the percentage of customers who are satisfied with their product. They decide to randomly select every 10th customer who walks into their store and ask them to fill out a survey. Which type of sampling method is being used and why?

SECTION-C
3Qx10M=30 Marks

Answer any three questions

3.	The marks obtained by nine students are 45, 47, 50, 52, 48, 47, 49, 53 and 50. Can this sample be regarded as taken from the population having mean marks of 47? (Given that $t_{(tab)}$ at 5% level of Significance is 2.31)	10	CO3
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4.	A company wants to investigate the factors that are affecting the sales of a new product they launched. Outline the steps that the company should follow in conducting this research.	10	CO3
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5.	A beverage company wants to determine the market demand for a new flavor of soda. They plan to conduct a survey of customers at their stores to gather data. What are some methods they can use for data collection? Which method do you think would be the most effective, and why? In addition to customer surveys, what other sources of information could the beverage company use to assess market demand for the new soda flavor?	10	CO3
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6	<p>A die was thrown 132 times and the following frequencies were observed,</p> <table border="1"> <tr> <td>No. obtained</td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> <td>6</td> </tr> <tr> <td>Observed</td> <td>15</td> <td>20</td> <td>25</td> <td>29</td> <td>28</td> <td>15</td> </tr> </table> <p>Is the die unbiased?</p> <p>(Chi-square for 5 degrees of freedom at 5 % level of significance =11.07)</p>	No. obtained	1	2	3	4	5	6	Observed	15	20	25	29	28	15	10	CO3
No. obtained	1	2	3	4	5	6											
Observed	15	20	25	29	28	15											

SECTION-D
2Qx15M= 30 Marks

Answer any two questions

7.	<p>Read the case carefully and answer the case questions.</p> <p>Yaseer Ahmed retired as a chef from a 5-star hotel in Delhi and returned to his hometown Ramveerpur (population 5 Lakh) in Uttar Pradesh (U.P.). However, he found it difficult to settle back into the community. He realized that he needed a vacation to keep him</p>	15	CO4
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	<p>occupied. He was still clueless about what to do when his friend Samar Dewan visited him. Yaseer explains his dilemma and asks for advice.</p> <p>Samar pondered over the problem, and suggested that considering Yaseer's expertise in exotic cuisine, he should think about setting up a restaurant serving non-vegetarian food. The enterprise would be perfect, as Ramveerpur hardly had any restaurant serving good non-vegetarian cuisine. Yaseer liked the idea very much. But before putting the idea into practice, he felt that it was important to have a rough estimate of the non-vegetarian population who went out for meals in a restaurant at least once in a typical week.</p> <p>Samar recalled a hotel industry report, according to which Ramveerpur's population comprise 15% Muslims, 20% Sikhs, 10% Jain, and 55% Hindu. It was known that generally, Muslim's were non-vegetarian, whereas 95% Sikhs were non-vegetarian. Further, the result of the report of hotel industry had indicated that more than 2 % of the population of the town ate out at least once a week.</p> <p>The data indicated a sound and profitable opportunity. However, Yaseer felt that before setting up a restaurant serving non-vegetarian food, a quick survey should be conducted. He wanted to carry out a survey of the households to understand their preference for various cuisines. All the households were assigned a serial number. He decided to survey 1000 households. His plan was to conduct every 100th household in a particular locality and ask for their eating preferences.</p> <p>Questions:</p> <ol style="list-style-type: none"> Identify the problem in this case and write decision problem. Suggest an appropriate sampling design with justification? 		
8.	<p>A marketing research firm conducted a survey to determine the proportion of consumers who prefer a particular brand of shampoo over its competitors. A sample of 400 consumers was randomly selected, and 240 of them indicated a preference for the brand in question.</p> <p>Using a significance level of 0.05, test whether there is sufficient evidence to conclude that the true proportion of consumers who prefer the brand is greater than 0.6. (Given that $Z_{(tab)}$ at 0.05 level of Significance is 1.645)</p> <ol style="list-style-type: none"> State the null and alternative hypotheses. Calculate the test statistic. Based on your result, what conclusion can you draw? 	15	CO4
9.	<p>A company wants to determine if a new training program has improved the productivity of their employees. They select a random sample of 5 employees and measure their productivity before and after the training program. The data is shown below:</p>	15	CO4

Employee	Before	After
1	20	22
2	18	21
3	23	24
4	19	20
5	22	23

Assuming that the differences in productivity are normally distributed, conduct a paired-sample t-test at a 5% level of significance to determine if the training program has had a significant effect on productivity. (Given that $t(\text{tab})$ value at 5% level of significance is 2.776)

- a) State the null and alternative hypotheses.
- b) Calculate the test statistic.
- c) Based on your result, what conclusion can you draw about the effectiveness of the training program on productivity?