UNIVERSITY OF PETROLEUM & ENERGY STUDIES
DEHRADUN

End Term Examination – Dec, 2022

Program/course:BBA   Semester – III
Subject: Research Methodology & Report Writing   Max. Marks : 100
Code   : DSRM 2001   Duration   : 3 Hrs
No. of page/s:04

SECTION A

Attempt all questions

1.	**Select correct answer**	**Marks**	**CO**
	(i) ---------------- includes survey & fact finding inquiries of the different kinds. (a) Descriptive research (b) analytical research (c) historical research (d) none of these (ii) ----------------------- research in applicable to phenomena that are measurable so that they can expressed in terms of quantity. (a) Quantitative research (b) qualitative research (c) Analytical research (d) Empirical research (iii) What is the first step in research process? (a) Developing hypothesis (b) Collection of data (c) Formulating research problem (d) Research design (vi) After formulating the research problem the research will prepare ------------------. (a) Sample design (b) Data collection method (c) research designs (d) none of these (v) Which of the following terms best describes data that were originally collected at an earlier time by different person for a different purpose? (a) Primary data (b) Secondary data (c) experimental data (d) field notes	**2x10**	**CO1**

(vi) Which among the following is a Non- Sampling Technique
(a) Quota Sampling
(b) Stratified Sampling
(c) Systematic Sampling
(d) Multistage Sampling

(vii) t- test is applicable when?
(a)   For Large Sample Size with Known population Standard Deviation
(b)   For Small Sample Size with Known population Standard Deviation
(c)   For Small Sample Size with Unknown population Standard Deviation
(d)   For Large Sample Size with Unknown population Standard Deviation

(viii) What criteria should research questions for a research proposal satisfy?
(a)   They must be understandable
(b)   They should be suitable for development into a research design, so that
         relevant data may be collected.
(c)   There should be enough research literature available on the topic
(d)   All of the above

(ix) A large bakery mass produces cakes on an assembly line. Each shift, a quality expert randomly selects one of the first ten finished cakes and every 10th cake thereafter. Employees weigh those cakes and give the cakes a detailed visual check. The method of sampling used in the study is
(a)   Simple random sampling
(b)   Stratified random sampling
(c)   Systematic Sampling
(d)   Cluster sampling

(x) What is a research design?
(a)   The choice between using qualitative or quantitative methods
(b)   The style in which you present your research findings, e.g. a graph
(c)   A framework for every stage of the collection and analysis of data
(d)   None of the above

	SECTION B		
	(Write short notes on any four of the following)		
2.	(i) Type-I and Type-II Error (ii) Sampling frame (iii) Causal Research Design (iv) Simple Random sampling (v) Parametric and Non- Parametric test	**5x4**	**CO2**
	SECTION C		
	(Attempt any three questions)		
3.	"The research process involves a series of interrelated and intricate steps". Justify the statement by explaining research phases in detail.	**10**	**CO3**
4.	1072 college students of BBA were classified according to their intelligence and economic conditions. Test whether there is any association between intelligence and economic conditions. <table><tr><td rowspan="2">Economic Conditions</td><td colspan="4">Intelligence</td></tr><tr><td>Excellent</td><td>Good</td><td>Mediocre</td><td>Dull</td></tr><tr><td>Good</td><td>48</td><td>199</td><td>181</td><td>82</td></tr><tr><td>Not good</td><td>81</td><td>185</td><td>190</td><td>106</td></tr></table> Tabulated value at 5% level of significance is 5.991	**10**	**CO3**
5.	Design a questionnaire to develop a better understanding of the carbonated soft-drink consumption habits of students in your region.	**10**	**CO3**
6.	The following are the marks of 200 Students. Find mean, median and mode. <table><tr><td>Marks</td><td>0-10</td><td>10-20</td><td>20-30</td><td>30-40</td><td>40-50</td><td>50-60</td></tr><tr><td>No. of Students</td><td>30</td><td>35</td><td>40</td><td>45</td><td>33</td><td>17</td></tr></table>	**10**	**CO3**

	SECTION-D		
	(Answer any two questions)		
7.	The mean weekly sales of soap bars in departmental stores was 140 bars per store. After an advertisement campaign, the mean weekly sales in 26 stores for a typical week increased to 147 and showed a standard deviation of 16. Can you infer that advertisement is effective in promoting sales? Use $\alpha=0.05$. Tabulated value of the test at 5% level of significance is 2.06.	**15**	**CO4**

8.	A consumer product manufacturer is planning to enter the cooking medium market with a new brand of Groundnut Oil. The Company wants to conduct a detailed study to identify users of the product and to collect information about usership and buying pattern. If you are working as a research executive in the company:
	a) What type of research would you propose?
	b) define following aspects of the study:
	   i) How would you define the population and the sampling frame in this case?
	   ii) What will be the method of data collection?
		15	**CO4**

9.	Yaseer Ahmed retired as a chaff 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 vocation to keep him occupied. He was still clue less about what to do, when his friend Samar Dewan visited him. Yaseer explains his dilemma and asked for advice. 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. 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. The data definitely 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	**15**	**CO4**

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.

Answer the following Questions.
  (i) Identify the problem in this case and write decision problem.
  (ii) Suggest an appropriate sampling method with justification?