

Name:
Enrolment No:



UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, Dec 2021

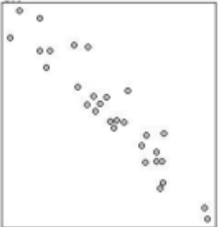


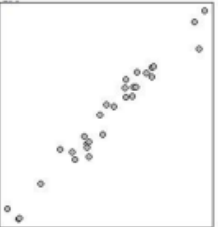
Course: Research Methodology
Program: M.Sc. Clinical Research
Course Code: HSCC7008

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

Instructions: Read question carefully.

SECTION A

S. No.	MCQ's /Fill in the blanks/ T&F/ Single Line Answer-type (1.5 marks each)	30 Marks	CO
1	The following are the criteria of a good research EXCEPT: A. Clearly defined purpose B. Well detailed research process C. Limitations undisclosed D. Conclusions justified	1.5	CO1
2	Which of the following statement is a correct statement? A. Research is the non-systematic process of collecting and analyzing information (data) in order to increase our understanding of the phenomenon about which we are concerned or interested. B. Research is the non-systematic process of collecting and analyzing information (data) in order to dampen our understanding of the phenomenon about which we are concerned or interested. C. Research is the systematic process of collecting and analyzing information (data) in order to increase our understanding of the phenomenon about which we are concerned or interested. D. Research is the systematic process of collecting and analyzing information (data) in order to dampen our understanding of the phenomenon about which we are concerned or interested.	1.5	CO1
3	A research should be all of the following EXCEPT: A. Systematic B. Non-replicable C. Empirical D. Logical	1.5	CO1
4	Which of the following is/are literature database that include MEDLINE records and is developed and managed by NCBI. A. Scopus B. PubMed C. Web of Science D. All of the above	1.5	CO1

5	To portray accurately the characteristics of a particular individual, situation or a group - It is an exploratory research. A. True B. False	1.5	CO1
6	To test a hypothesis of a causal relationship between variables – It is a hypothesis-testing research. A. True B. False	1.5	CO1
7	Research involves gathering new data from primary sources or using existing data for a new purpose. A. True B. False	1.5	CO1
8	The following are the multivariate analysis techniques EXCEPT A. Factor Analysis B. Cluster Analysis C. Correlation coefficients D. Variance Analysis	1.5	CO1
9	Which of the following is used during hypothesis testing? A. Chi square test B. Student t-test C. F-test D. All of the above	1.5	CO1
10	_____ is a characteristic that takes on two or more values, whereas, a/an _____ is a specific value on a variable.	1.5	CO1
11	The variables selected for analysis are called _____	1.5	CO1
12	_____ refers to the task of drawing inferences from the collected facts after an analytical and/or experimental study.	1.5	CO1
13	Calculate the arithmetic mean of the following data: 58, 67, 60, 84, 93, 98, 100	1.5	CO3
14	Find the median of the following scores: 97, 50, 95, 51, 90, 60, 85, 64, 81, 65, 80, 70, 75	1.5	CO3
15	Which of the following graphs most closely corresponds to a correlation coefficient of 1? A  B  C  D 	1.5	CO2
16	Write about different types of sampling errors.	1.5	CO2
17	Define an independent variable.	1.5	CO1
18	Define the primary and secondary data.	1.5	CO1

19	Define the univariate and bivariate analysis.	1.5	CO1
20	Discuss on ideal characteristics of a sample.	1.5	CO4
SECTION B (5 marks each question)			
Q	Short Answer Type Question (5 marks each) Word limit (100-120)	20 Marks	CO
1	What is Research? Discuss the experimental and non-experimental research.	(1+4)	CO3
2	Discuss on various factors that need to be taken into account during the selection of appropriate method for data collection.	5	CO5
3	Define hypothesis. What are the various characteristics of a good hypothesis?	(1+4)	CO4
4	What is a research problem (or problem statement)? Discuss on the process involved in defining the research problem.	(2+3)	CO2
SECTION C 30 marks			
Q	Two case studies 15 marks each subsections	30 Marks	CO
1	(a) Calculate the arithmetic mean of the following 50 researchers according to their daily wages: Daily Wages : 15 18 20 25 30 35 40 42 Number of workers: 2 3 5 10 12 10 5 2 (b) A researcher wants to determine the qualification of employed professionals in Maryland. He uses a survey as his research instrument, and each item on the survey related to qualifications is subjected to a Yes/No answer. What is the type of research (descriptive or exploratory or hypothesis-testing). Justify your answer, in brief.	8+7	CO4
2	Suppose you have been sanctioned a fund to collect data on the quality of four vitamin-based products from four different companies. What are the various strategies that you will follow to accomplish it? Which strategy do you feel is the best? Give the questionnaire for the same that you will use during data collection.	15	CO4
SECTION- D 20 marks			
Q	Long Answer type Questions (10 marks each) Word limit 200-250	20 Marks	CO
1	(a) What is research problem? Define the main issues that should receive the attention of the researcher in formulating the research problem. (1+4) (b) Explain the meaning and significance of a research design.	10 (5+5)	CO4

2	(a) Discuss on the various criteria of selecting a sampling procedure. (b) Describe the various characteristics of a good sample design	10 (6+4)	CO5
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