

Name:	
Enrolment No:	

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, December 2019

Course: Applied research Methodology Program: BA(Hons.) Economics (Spz. In Energy Eco.) Course code: DSRM2002	Semester: III Time: 03 Hours Max. Marks: 100
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SECTION A **(20 Marks)**

Each question in section A is a multiple-choice question with four answer choices. Read each question and choose the one best answer.

1.	Which research is the problem oriented to solve a specific problem that requires a decision? (a) Fundamental research (b) Applied research (c) Exploratory research (d) Descriptive research	2	CO1
2.	Which one obtain the data from a subset of population, in order to estimate population attributes? (a) Census (b) Experiment (c) Sample survey (d) Sampling	2	CO1
3.	Which variable is capable of taking on an ordered set of values within a certain range? (a) Dependent (b) Independent (c) Continuous (d) Categorical	2	CO1

<p>4.</p>	<p>Research Problem can be stated in the form of</p> <p>(a) Only question (b) Only statement (c) Neither question nor statement (d) Either question nor statement</p>	<p>2</p>	<p>CO1</p>
<p>5.</p>	<p>A sampling in which every member of the population has a calculable and non-zero probability of being included in the sample is known as</p> <p>(a) Probability Sampling (b) Non- probability sampling (c) Judgment sampling (d) Multistage sampling</p>	<p>2</p>	<p>CO1</p>
<p>6.</p>	<p>Which scale of the following allows the categorization of responses into a number of mutually exhaustive categories?</p> <p>(a) Nominal (b) Ordinal (c) Interval (d) Ratio</p>	<p>2</p>	<p>CO1</p>
<p>7.</p>	<p>Which one of the following is the advantage of the secondary data?</p> <p>(a) Degree of accuracy is quite high (b) It helps to improve the understanding of the problem (c) Data may be outdated (d) None of the above</p>	<p>2</p>	<p>CO1</p>
<p>8.</p>	<p>In which of the following scales there is no neutral point</p> <p>(a) Likert Scale (b) Interval Scale (c) Stapel Scale (d) Semantic Differential Scale</p>	<p>2</p>	<p>CO1</p>

9.	<p>Which is not used to define target population</p> <p>(a) Element</p> <p>(b) Extent</p> <p>(c) Sampling unit</p> <p>(d) Sampling frame</p>	2	CO1
10.	<p>In which of the following design it is possible to see the effect of more than one independent variable on dependent variable</p> <p>(a) Randomize block Design</p> <p>(b) Completely Randomized design</p> <p>(c) Latin square design</p> <p>(d) Factorial design</p>	2	CO1
SECTION B (20 Marks)			
	<p>Attempt All the questions:</p>		
11.	<p>Distinguish between null and alternative hypothesis with example.</p>	5	CO1, CO2
12.	<p>An investigator wants to estimate the proportion of freshmen at his University who currently smoke cigarettes (i.e., the prevalence of smoking). How many freshmen should be involved in the study to ensure that a 95% confidence interval estimate of the proportion of freshmen who smoke is within 5% of the true proportion?</p>	5	CO1, CO2
13.	<p>Explain layout of the research report.</p>	5	CO1, CO2
14.	<p>Distinguish between independent, dependent and extraneous variable.</p>	5	CO1, CO2

SECTION-C

(30 Marks)

Attempt any three Questions:

15.

The following table gives the number of good and defective parts produced by each of the three shifts in a factory.

Shift	Good	Defective	Total
Day	900	130	1030
Evening	700	170	870
Night	400	200	600
Total	2000	500	2500

Is there any association between the shifts and the quality of the parts produced? Use a 0.05 level of significance.

10

CO1,
CO2,
CO3

16.

The manager of ABC ice-cream parlour has to take a decision regarding how much of each flavour of ice-cream he should stock so that the demands of the customers are satisfied. The ice-cream supplies claim that among the four most popular flavours, 62 percent customers prefer vanilla, 18 percent chocolate, 12 percent strawberry and 8 per cent mango. A random sample of 200 customers produces the results below. At the $\alpha=0.05$ significance level, test the claim that the percentages given by the supplies are correct.

Flavour	vanilla	chocolate	Strawberry	Mango
No Preferring	120	40	18	22

10

CO1,
CO2,
CO3

17.

Two salesmen ,A and B are employed by a company. Recently, it has conducted a sample survey yielding the following data:

	Salesman A	Salesman B
No of sell	20	22
Average sell	800	780
Standard deviation	70	60

Is there any significant difference between the average sales of the two salesmen?

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CO1,
CO2,
CO3

18.	Consider the data on the quantity demanded and the price of a commodity over a ten- year period as given in the following table:		10	CO1, CO2, CO3	
	Year	Demand			Price
	1996	100			5
	1997	75			7
	1998	80			6
	1999	70			6
	2000	50			8
	2001	65			7
	2002	90			5
	2003	100			4
	2004	110			3
	2005	60			9
(a) Estimate the correlation coefficient between the quantity demanded and price and interpret the same.					
(b) Computer r^2 and interpret the same.					

SECTION-D (30 Marks)

	Answer the question based on following Case Study:		
	Peter decided to base his research project on the Chinese firms. The main objective of his proposed research was to better understand the internationalization and global brand development of Chinese firms. The aim is not only to evaluate internationalization and the reasons China lacks a truly global brand, but also to Analyse what types of strategy Chinese firms need to take in order to achieve ‘global brand’ status.		
19.	Give the suitable research design for the above case. Give reasons in support of your answer.	10	CO1, CO2, CO3, CO4
20.	Can you suggest a better design?	10	CO1, CO2, CO3, CO4
21.	What are the main objectives of the study?	10	CO1, CO2, CO3, CO4