



Name:

Enrolment No:

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES

End Semester Examination, May 2022

Course: Quantitative Techniques and Research Methodology

Program: B.A. Public Policy and Administration

Course Code: BAPP 2007

Semester: IV

Time : 03 hrs.

Max. Marks: 100

Instructions:

SECTION A
10Qx2M=20Marks

S. No.		Marks	CO																		
Q 1	<p>A sociologist chose 300 students at random from each of the two school and asked each student how many sibling he or she has. The results are shown in the table below:</p> <table border="1"><thead><tr><th>Number of Siblings</th><th>St. Joshep School</th><th>St. Xavier's School</th></tr></thead><tbody><tr><td>0</td><td>120</td><td>140</td></tr><tr><td>1</td><td>80</td><td>110</td></tr><tr><td>2</td><td>60</td><td>30</td></tr><tr><td>3</td><td>30</td><td>10</td></tr><tr><td>4</td><td>10</td><td>10</td></tr></tbody></table> <p>There are total 2400 students at St. Joshep School and 3300 students at St. Xavier's School. What is the median number of siblings for all the students surveyed?</p> <p>a. 0 b. 1 c. 2 d. 3 e. 4</p>	Number of Siblings	St. Joshep School	St. Xavier's School	0	120	140	1	80	110	2	60	30	3	30	10	4	10	10	2	CO2
Number of Siblings	St. Joshep School	St. Xavier's School																			
0	120	140																			
1	80	110																			
2	60	30																			
3	30	10																			
4	10	10																			
Q 2	<p>The arithmetic mean of 6, 19 and x is 19. Find the value of x.</p> <p>19 b. 25 c. 31 d. 32 e. 37</p>	2	CO3																		
Q 3	<p>10, 18, 4, 15, 3, 21, x</p> <p>If x is the median of 7 numbers listed above, which of the</p>	2	CO2																		

	<p>following could be value of x?</p> <p>a. 4 b. 5 c. 8 d. 9 e. 14</p>		
Q 4	Determine the median and modal values for the set: [73.8, 126.4, 40.7, 141.7, 28.5, 237.4, 157.9]	2	CO2
Q 5	21 bricks have a mean mass of 24.2 kg, and 29 similar bricks have a mass of 23.6 kg. Determine the mean mass of the 50 bricks.	2	CO2
Q 6	<p>The frequency distribution given below refers to the heights in centimetres of 100 people. Determine the mean value of the distribution, correct to the nearest millimetre.</p> <p>150–156 5, 157–163 18, 164–170 20 171–177 27, 178–184 22, 185–191 8</p>	2	CO
Q 7	Determine the mean, median and modal values for the following set: [4.72, 4.71, 4.74, 4.73, 4.72, 4.71, 4.73, 4.72]	2	CO2
Q 8	<p>Which one of the following is the most comprehensive source of population data?</p> <p>a. Census b. National Sample Surveys c. Demographic health Surveys d. National Family Health Surveys</p>	2	CO1
Q 9	<p>Field work based research is classified as</p> <p>a. Historical b. Empirical c. Biographical d. Experimental</p>	2	CO1

Q 10	Identify the personal data----- A. Marital status B. Geographical characteristics C. Occupation pattern D. District	2	CO1
SECTION B 4Qx5M= 20 Marks			
Q 11	Differentiate between Cluster Sampling and Stratified Sampling.	4	CO2
Q 12	How sampling bias happens? How it can be minimized?	4	CO3
Q 13	Distinguish between participant observation and Non-Participant observation. Cite relevant examples	4	CO2
Q 14	Differentiate between References and Bibliography.	4	CO2
SECTION-C 3Qx10M=30 Marks			
Q 15	Discuss the components of Research Proposal. Differentiate between research Proposal and research report.	10	CO3
Q 16	Define Stratified random Sampling. Discuss all the Advantages and disadvantages of Stratified random sampling.	10	CO3
Q 17	What are the guiding considerations in the construction of a good questionnaire? Explain. Discuss the merits and limitations of Questionnaire method. OR Critically evaluate the various errors in measurement in research methodology	10	CO4
SECTION-D 2Qx15M= 30 Marks			
Q 18	Ethics in Research. Substantiate with examples.	15	CO4
Q 19	“Research is much concerned with proper fact finding, analysis and evaluation.” Do you agree with this statement? Give reasons in support of your answer. OR Explain the probability sampling strategies with examples	15	CO4