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

Course: Healthcare Research Method and Professional Issues   **Semester: VII**
Program: B.Tech CSE spl in Health Care Informatics   **Time   : 03 hrs.**
Course Code: CSEG 445   **Max. Marks: 100**

Instructions:

SECTION A

S. No.		Marks	CO
Q 1	Illustrate the importance of research in Health Care. Identify the challenges encounter while working with heuristic data.	4	CO1
Q 2	Research in healthcare industry plays with multiple dynamic variables. Differentiate between traditional clinical research and outcome-based research carried out to understand the effect of air bone disease.	4	CO2
Q 3	Define true and false positive rate during the correlation of dataset.	4	CO2
Q 4	State the rule of thumb for identifying sample size of the dataset.	4	CO2
Q 5	Document present the exact summary of the research carried out. Recall deferent erroneous premise while writing case report.	4	CO5
SECTION B			
Q 6	Research in Health care industry is public in nature hence different bodies can undertake same research at the same time. Elucidate different ethnic issue encounter while carrying out simultaneous research.	10	CO2
Q 7	Variable plays a very important role while carried out document driven research. Identify specific variable and their relevance while caring out research to identify the side effect of a medicine on patients.	10	CO3
Q 8	Perform Friedman Repeated measures ANOVA for the following statement: You would like to see if the brand of incentive spirometer has any affect on patient compliance. You select a group of six post-operative surgical patients and have them try each of three different incentive spirometers. The patients rank their opinion numerically (0 = don't like, 1 = neutral, 2 = like). The data are entered into a table like this: **Spirometer A** 0 1 0 0 1 1 **Spirometer B** 1 1 2 1 0 1 **Spirometer C** 2 1 2 2 2 2 **Or** Perform Two Way Measure ANOVA for the following statement	10	CO4

	You have a care path for pediatric asthmatic patients that requires therapists to perform assessments at specified intervals of 2, 3, and 4 hours from the start of treatments. One of these assessment is forced expiratory volume in one second (FEV1) which requires both time and equipment to perform bedside spirometry. You suspect that FEV1 does not change that much over 4 hours and may thus be eliminated as an assessment procedure. On a group of 10 patients treated with the care path, you record FEV1 values after 2, 3, and 4 hours of bronchodilator treatment:		
	2 Hours **3 Hours** **4 Hours**		
	1.23 1.81 1.81		
	1.38 1.38 1.77		
	1.01 1.46 1.56		
	0.96 1.41 1.60		
	1.31 1.44 1.77		
	1.12 1.26 1.28		
	1.09 1.48 1.72		
	1.19 1.46 1.80		
	1.27 1.00 1.63		
	1.17 1.23 1.80		
Q 9	Illustrate the importance of correlation in any research. Elucidate kappa and phi correlation with respect to the allergies.	**10**	**CO1**
	SECTION-C		
Q 10	Design a scientific method based planning to map the outbreak of dengue in Dehradun.	**20**	**CO5**

Q 11	Paraphrase detail note on
	   a) CQI **Or** Wilcoxon Signed Rank Test
	   b) Z Test **Or** McNemar's test
		10+10	**CO3,CO4**