UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, December 2018

Course: Advanced & Predictive Analytics for Healthcare   **Semester:** VII
Programme: B. Tech CSE Splz in Healthcare Informatics   **Time:** 03 hrs.
Course Code: CSEG491   **Max. Marks:** 100

S. No.	SECTION A	Marks	CO
	All the questions should be answered	**Marks**	**CO**
Q1	Why is it essential to mine data and how do we do it?	4	CO1
Q2	What is KDD process and what challenges is this process going to address?	4	CO1
Q3	From a quality aspect, why is it is essential to prepare the data for processing	4	CO2
Q4	Discuss the need of data partition, by evaluating pro's and con's.	4	CO3
Q5	What is the necessity to have a model evaluation criteria? What requirements does this mechanism fulfill from KDD point of View?	4	CO4

SECTION A — 5 X 4 = 20

	SECTION B		
Q6	Using CRISP process, demonstrate how a business outcome will be supported and why Data is going to be used in strengthening the outcome?	10	CO1
Q7	With the help of examples demonstrate how, various data preparation techniques work that will strengthen KDD process **Or** Evaluate any two different data preparation technique from an implementation aspect for medical data.	10	CO2
Q8	What is entropy? Demonstrate how information gain & entropy are applied in Decision Trees?	10	CO3
Q9	How is linear regression model evaluated, when there is randomization in data and the entropy is low?	10	CO4

SECTION B — 4 X 10 = 40

	SECTION-C		
Q10	Why is Neural Network (NN) considered as a classifier? What kind of problem cases can NN handle especially in non-linearity? Also, how do we measure correctness in classification? **Or** Significance of learning is very much essential in data sciences. Justify your solution?	20	CO3
Q11	Develop a critical evaluation chart that signify when evaluation technique is best for which type of model and for that, what possible data preparation will fit? Support you answer either by taking a typical industrial case (case study should be explained in no more than 150 words) or by fundamentals of methods and techniques.	20	CO4

SECTION-C — 2 X 20 = 40