Name:

Enrollment No:

UPES
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UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Sem Examination, December 2021

Course: Data Visualization for Analytics **Semester: III**
Programme: B.Tech. CSE BAO **Course Code: CSBA2007**
Time: 03 hrs. **Max. Marks: 100**

SECTION A

Q. No.		Marks	CO
Q 1	Explain different types of data with examples.	**4**	**CO1**
Q 2	Define Multivariate analysis. List out any three methods used for Multivariate analysis.	**4**	**CO2**
Q 3	Define Null and alternate hypotheses with examples.	**4**	**CO3**
Q 4	Write the differences between Business intelligence and Business Analytics.	**4**	**CO4**
Q 5	Let's assume; a diagnostic test has 99% accuracy, and 60% of all people have Covid-19. If a patient tests positive, what is the probability that they actually have the disease?	**4**	**CO3**

SECTION B

Q 6	Explain different types of maps with examples.	**10**	**CO1**
Q 7	Discuss any five visual forms and their application.	**10**	**CO1**
Q 8	Explain any five reasons for outliers in a data set. How can Dbscan algorithm be used to detect outliers in the given data set?	**10**	**CO2**
Q 9	Find the correlation using Karl Pearson's coefficient of correlation between the values of P and Q given here under: P: 46, 68, 72, 75, 80, 70, 93, 100 Q: 64, 50, 39, 48, 12, 52, 46, 30	**10**	**CO2**
	OR		
	State the correlation by calculating the Spearman's rank Correlation coefficient between the variables P and Q given here under: P: 35, 36, 40, 38, 37, 39, 41, 40, 36, 38 Q: 65, 72, 78, 77, 76, 77, 80, 79, 76, 75	**10**	**CO2**

Section C

Q 10	a) How can boxplots be used for outlier detection? Explain different components of a boxplot. b) Draw a boxplot for the given dataset and identify the outlier values. 13, 67, 21, 31, 8, 45, 32, 27, 26, 21, 24, 23	**10+10**	**CO3**
Q 11	a) Discuss different types of dashboards with their applications. b) Explain step by step process of creating the dashboard in detail.	**10+10**	**CO4**
	OR		
	a) Discuss any three 3D plots with their applications. b) How can the animation be created using Matplotlib? Discuss steps to develop animation of any one 3D plot.	**10+10**	**CO4**