Total No. of Questions : 4]

SEAT No. :

P-5143

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T.E. (Computer Engineering) (Insem.)

DATA SCIENCE AND VISUALIZATION (Honors)

(2019 Pattern) (Semester - I) (310501)

Time : 1 Hour] *[Max. Marks : 30*

Instructions to the candidates :

1) ***Answer Q.1 or Q.2, Q.3 or Q.4.***
2) ***Neat diagrams must be drawn wherever necessary.***
3) ***Figures to the right indicate full marks.***
4) ***Assume suitable data, if necessary.***

Q1) a) Elaborate different stages of data science process in detail. **[6]**

b) What is supervised Machine Learning? Elaborate with suitable example and enlist its applications. **[5]**

c) Define the terms : **[4]**

i) Data science

ii) Big Data

OR

Q2) a) What is Unsupervised Machine Learning? Elaborate with suitable example. **[6]**

b) How is Machine Learning related to Data Science? Explain in detail. **[5]**

c) Define the terms:

i) Correlation

ii) Variance **[4]**

P.T.O.

Q3) a) Calculate the mean, median, mode of the following data and comment on Skewness of data.

17, 16, 25, 23, 22, 23, 28, 25, 25 **[6]**

b) Explain normal distribution and its characteristics. **[5]**

c) Write a note on conditional Probability. **[4]**

OR

Q4) a) Define Central Tendencies (Mean, Median and Mode) with examples. **[6]**

b) What is Bayes Theorem? How it is used to solve classification problem in machine learning? Illustrate with suitable example. **[5]**

c) Define the terms related to data science. **[4]**

i) Co-Variance

ii) Standard Deviation

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