

Total No. of Questions : 4]

SEAT No. :

PB-110

[Total No. of Pages : 2

[6269]-324

T.E. (Artificial Intelligence and Data Science) (Insem)

DATA SCIENCE

(2019 Pattern) (Semester - II) (317529)

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) What is Data Science? Explain its use in AI. [5]
- b) Explain the various applications of Data Science. [5]
- c) Imagine you have given the data set with the Null or Nan values. Apply data wrangling methods used in data science. [5]

OR

- Q2)** a) Explain null and alternative hypothesis by considering the example for a flipping coin. [5]
- b) Describe Bayes theorem in detail with an example. [5]
- c) Explain Standard deviation and Inter Quartile range and write python code to compute the standard deviation and interquartile range. [5]

- Q3)** a) What is data Wrangling? Explain various methods of data wrangling. [5]
- b) Explain Data Cleaning, Data Transformation. [5]
- c) Explain Data Integration and Discretization. [5]

OR

P.T.O.

- Q4)** a) What is hypothesis testing? [5]
- b) Explain different measures of dispersion. [5]
- c) Solve the following. [5]

Suppose the probability of the weather being cloudy is 40%. Also suppose the probability of rain on a given day is 20%. Also suppose the probability of clouds on a rainy day is 85%. If it's cloudy outside on a given day, what is the probability that it will rain that day?

