

Total No. of Questions : 8]

SEAT No. :

PC2633

[6354]-782

[Total No. of Pages : 2

**B.E. (Artificial Intelligence and Data Science)
DATA MODELING AND VISUALIZATION
(2019 Pattern) (Semester-VII) (417522)**

Time : 2½ Hours]

[Max. Marks : 70

Instructions to the candidates:

- 1) Answer Q.1 or Q.2, Q.3 or Q.4, Q.5 or Q.6 Q.7, or Q.8.
- 2) Neat diagrams must be drawn wherever necessary.
- 3) Figures to the right side indicate full marks.
- 4) Assume suitable data, if necessary.

Q1) a) Explain in detail design choices in data visualization. [8]

b) Explain data handling for data visualization. [9]

OR

Q2) a) Write a short note on Role of Computational Statistics in data visualization. [8]

b) Explain the different types of Data visualization. [9]

Q3) a) Explain the Force-directed Techniques and Multidimensional Scaling in detail. [9]

b) Explain importance of reshaping and pivoting in data visualization. [8]

OR

Q4) a) Write a short note on Pulling Under Constraints Model. [8]

b) Explain the process of data wrangling in detail. [9]

Q5) a) Explain Data aggregation with suitable example. [9]

b) Explain in detail cross tabulation & Time Series. [9]

OR

Q6) a) Explain Group by Mechanics techniques in data modeling and visualization. [9]

b) Write a short note on. [9]

i) Pivot Tables

ii) Periods and Periods Arithmetic

Q7) a) Explain PET Images and its applications in data modeling and visualization. [9]

b) Explain the various data reconstruction techniques used to assist data modeling and visualization. [9]

OR

Q8) a) Write a short note on. [9]

i) Ultrasound Images

ii) Magnetic Resonance Images

b) Explain ER/Studio with its applications. [9]

