

Code No: 138FU

**R16**

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD**

**B. Tech IV Year II Semester Examinations, December - 2020**

**DATA ANALYTICS**

**(Common to ECE, CSE)**

**Time: 2 Hours**

**Max. Marks: 75**

**Answer any Five Questions  
All Questions Carry Equal Marks**

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1. "The secondary data can be obtained through internal and external sources for an organization". Justify your answer with a real - time scenario. [15]
- 2.a) Discuss the measures to be taken for achieving data quality.  
b) Illustrate the significance of data preprocessing. [7+8]
3. Explain the application of modeling in business and any one data modeling technique in detail. [15]
- 4.a) Describe the various steps involved in data analytics.  
b) Differentiate between nominal data and ordinal data. [10+5]
5. Apply linear regression using the method of least squares to the following data and predict the salary for a person with 10.5 years. [15]

Years of experience	3	8	9	3	15	9	11	16	20	6
Salary	21K	50K	64K	26K	81K	66K	58K	83K	90K	41K

- 6.a) Demonstrate maximum likelihood estimation.  
b) Discuss the importance of sigmoid function. [7+8]
7. Describe the components of time series data and explain ARIMA model for time series analysis with illustrations. [15]
- 8.a) Appraise tree maps as a hierarchical visualization technique.  
b) Substantiate the use of geometric projection visualization techniques for multi dimensions. [7+8]

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