

## **CS3352 FOUNDATIONS OF DATA SCIENCE**

### **IMPORTANT QUESTIONS**

#### **UNIT - I INTRODUCTION**

##### **2 - Mark**

1. Write the Benefits and uses of Data Science
2. What are facets of data?
3. Write about the Data Science Process.
4. What is Defining research?
5. What is Retrieving data?
6. Define Data Mining.
7. What is Data Warehousing?

##### **13 - Mark**

1. Describe the Data Science Process
2. Explain Data preparation.
3. Describe Exploratory Data analysis.
4. Explain presenting findings and building applications.
5. State the Basic Statistical descriptions of Data.

#### **UNIT - II DESCRIBING DATA**

##### **2 - Mark**

1. What is Frequency distribution?
2. What are the types and uses of Frequency distributions?
3. What is Grouped frequency distribution.
4. What is ungrouped frequency distribution?
5. What is cumulative frequency distribution?
6. What is relative frequency distribution?

13 - Mark

1. Explain the various Types of Data.
2. Describe the Types of Variables.
3. Write about the Describing Data with Tables and Graphs.
4. Explain Describing Data with Averages.
5. Write about the Describing Variability.
6. Explain Normal Distributions and Standard (z) Scores.

**UNIT - III DESCRIBING RELATIONSHIPS**

2 - Mark

1. What is correlation?
2. Define Scatterplots?
3. What is correlation coefficient?
4. Define Regression.
5. Write the types of Regression analysis.

13 - Mark

1. Explain correlation coefficient for quantitative data.
2. Describe the computational formula for correlation coefficient.
3. Explain least squares regression line.
4. State the Standard error of estimate.
5. Write about the interpretation of  $r^2$ .
6. Explain multiple regression equations.

**UNIT - IV PYTHON LIBRARIES FOR DATA WRANGLING**

2 - Mark

1. What is Numpy in Python used for?
2. Write a python program create an array.
3. Write the output of the following numpy code.

4. Define computations on arrays
5. What is data indexing and selection?
6. Write about structured arrays?
7. What is missing data?

**13 - Mark**

1. Explain Boolean logic.
2. Describe fancy indexing.
3. Give detailed explanation for Data manipulation with Pandas.
4. Explain operating on data.
5. Write about the Hierarchical indexing.
6. Explain combining datasets.
7. Describe aggregation and groping.

**UNIT - V DATA VISUALIZATION**

**2 - Mark**

1. What is the purpose of matplotlib?
2. Write the dual interface of matplotlib?
3. How to draw a simple line plot using matplotlib?
4. What functions can be used to draw the scatterplot?
5. Define visualizing errors.
6. What are Line plots?

**13 – Mark**

1. Differentiate Line plots & Scatter plots.
2. Describe Importing Matplotlib.
3. Give detailed explanation for density and contour plots -
4. Explain Histograms.
5. Explain the three dimensional of data visualization
6. Describe Geographic Data with Basemap.
7. Explain Visualization with Seaborn.

B.E/B.TECH, M.E/M.TECH, MBA, MCA, POLYTECHNIC & SCHOOLS

*Notes*

*Syllabus*

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