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**SAMPLE PAPER 2**  
**End Term Examination**  
**Data Analysis Using R and Python**  
**Time: 3 Hours    Maximum Marks: 70**

**SECTION A (Compulsory)**

**7 × 2 = 14 Marks**

1. Define missing values.
2. Mention any two Python data types.
3. What is a bar plot?
4. Write the purpose of `rbind()` in R.
5. What is a Series object in Pandas?
6. Define outliers.
7. State one use of NumPy arrays.

**SECTION B**

**Attempt any four questions.**

1. Explain steps involved in exploratory data analysis (EDA) with examples.
2. Describe lists and vectors in R with suitable examples.
3. Discuss univariate and multivariate descriptive statistics in detail.
4. Explain data filtering and conditional selection in Pandas.
5. Discuss Python functions and lambda expressions with syntax.
6. Write short notes on: (1) Scatter plots, (2) Boxplots, (3) Histograms.
7. Explain data merging and joining in Pandas with code.
8. Describe NumPy indexing and slicing operations with examples.