**Pandas Exam Paper 1 (Total 30 Questions - 2 Marks Each)**

### **Section A: Data Creation and Importing (7 Questions)**

1. **Creating a DataFrame**  
   **Answer:**

import pandas as pd

df = pd.DataFrame({

Name: ['Alice', 'Bob', 'Charlie']

Age: [25, 30, 35]

City: ['New York', 'Los Angeles',

'Chicago']

})

print(df)

1. **Reading CSV File**  
   **Answer:**

df = pd.read\_csv('data.csv')

1. **Reading Excel File**  
   **Answer:**

df = pd.read\_excel('data.xlsx')

1. **Reading JSON File**  
   **Answer:**

df = pd.read\_json('data.json')

1. **Reading HTML Table**  
   **Answer:**

df\_list = pd.read\_html('data.html')

df = df\_list[0]

1. **Creating DataFrame from a Dictionary**  
   **Answer:**

df = pd.DataFrame({

Product: ['Laptop', 'Phone', 'Tablet'],

Price: [1000, 500, 300]

})

print(df)

1. **Exploring DataFrame from CSV**  
   **Answer:**

df.head()

### **Section B: Data Inspection (7 Questions)**

1. **Viewing First Few Rows**  
   **Answer:**

df.head(10)

1. **Viewing Last Few Rows**  
   **Answer:**

df.tail(3)

**10.Checking DataFrame Information**  
 **Answer:**

df.info()

**11.Descriptive Statistics**  
 **Answer:**

df.describe()

**12.Checking Data Types**  
 **Answer:**

df.dtypes

**13.Checking DataFrame Shape**  
 **Answer:**

df.shape

**14.DataFrame Summary**  
**Answer:**

df.info()

### **Section C: Indexing and Selecting Data (8 Questions)**

1. **Setting an Index**  
   **Answer:**

df.set\_index('ID', inplace=True)

1. **Resetting an Index**  
   **Answer:**

df.reset\_index(inplace=True)

1. **Selecting Data by Position**  
   **Answer:**

df.iloc[2]

1. **Selecting Data by Label**  
   **Answer:**

df.loc[df['Age'] > 30]

1. **Querying the DataFrame**  
   **Answer:**

query('Salary > 50000')

1. **Sorting Values**  
   **Answer:**

df.sort\_values(by='Price',ascending=True)

1. **Selecting Top N Rows by Value**  
   **Answer:**

**Df.nlargest(3, ‘Marks’)**

**22. Selecting Smallest N Rows by Value**

**Answer:**

df.nsmallest(2, 'Age')

### **Section D: Data Cleaning (8 Questions)**

1. **Detecting Missing Values**  
   **Answer:**

df.isnull()

1. **Removing Missing Values**  
   **Answer:**

df.dropna()

1. **Filling Missing Values**  
   **Answer:**

df['Salary'].fillna(df['Salary'].mean(),inplace=True)

1. **Dropping Duplicate Rows**  
   **Answer:**

df.drop\_duplicates(inplace=True)

1. **Replacing Values**  
   **Answer:**

df['Gender'].replace('M', 'Male', inplace=True)

1. **Converting Data Types**  
   **Answer:**

df['Age'] = df['Age'].astype(int)

1. **Handling Missing Values in Specific Column**  
   **Answer:**

df.dropna(subset=['Age'], inplace=True)

1. **Filling Missing Values Using Forward Fill**  
   **Answer:**

df.fillna(method='ffill', inplace=True)