Pandas Assignment iNeuron:

Q1. How do you load a CSV file into a Pandas DataFrame?

```
import pandas as pd
df = pd.read_csv(“path_of_file/file_name.csv”)
```

Q2. How do you check the data type of a column in a Pandas DataFrame?

```
df.dtypes
```

Q3. How do you select rows from a Pandas DataFrame based on a condition?

```
df_new = df['Age'] > 30
```

Q4. How do you rename columns in a Pandas DataFrame?

```
df.rename(columns={'Name': 'Full Name', 'Gender': 'Sex'}, inplace=True)
```

Q5. How do you drop columns in a Pandas DataFrame?

```
df.drop(['Name', 'Gender'], axis=1, inplace=True)
```

Q6. How do you find the unique values in a column of a Pandas DataFrame?

```
df[‘Gender’].unique()
```

Q7. How do you find the number of missing values in each column of a Pandas DataFrame?

```
df[‘Aadhar_No’].isna().sum()
```

Q8. How do you fill missing values in a Pandas DataFrame with a specific value?

```
df.fillna({"A":df['A'].mean(),
           "B": df['B'].median(),
           "C": df['C'].mode()[0]},
           inplace=True)
```

Q9. How do you concatenate two Pandas DataFrames?

```
df3 = pd.concat([df1,df2])
```

Q10. How do you merge two Pandas DataFrames on a specific column?

df = pd.merge(df1, df2, ON = ‘Roll_No’)

Q11. How do you group data in a Pandas DataFrame by a specific column and apply an aggregation function?

df1.groupby(‘Gender’)[’Salary’].mean()

Q12. How do you pivot a Pandas DataFrame?

df.pivot(index='Name', columns='Subject', values=‘Marks’)

Q13. How do you change the data type of a column in a Pandas DataFrame?

df[‘Age’].astype(int)

Q14. How do you sort a Pandas DataFrame by a specific column?

df.sort_values('Salary', ascending=True)

Q15. How do you create a copy of a Pandas DataFrame?

new_df = old_df[['col1','col2']].copy()

Q16. How do you filter rows of a Pandas DataFrame by multiple conditions?

df[(df[‘Age’]<30) & (df[‘Age’]>20)]

Q17. How do you calculate the mean of a column in a Pandas DataFrame?

df[‘Age’].mean()

Q18. How do you calculate the standard deviation of a column in a Pandas DataFrame?

df.std()

Q19. How do you calculate the correlation between two columns in a Pandas DataFrame?

df[’Age’]. corr(df[‘Salary’])

Q20. How do you select specific columns in a DataFrame using their labels?

```
df.iloc[:,[1,3,4]]      # Select columns by Index
df2 = df.iloc[:,1:4]  # Select between indexes 1 and 4 (2,3,4)
df2 = df.iloc[:,2:]    # Select From 3rd to end
df2 = df.iloc[:,:2]    # Select First Two Columns

df2 = df.loc[:, ["Courses", "Fee", "Duration"]]
f2 = df.loc[:,:'Duration']     # Select columns from first until ‘Duration’
df2 = df.loc[:,::2]               # Select every alternate column
```

Q21. How do you select specific rows in a DataFrame using their indexes?

```
df.iloc[1:4]
```

Q22. How do you sort a DataFrame by a specific column?

```
df.sort_values(‘Salary’, ascending=False)
```

Q23. How do you create a new column in a DataFrame based on the values of another column?

```
df[‘New_Salary’] = df[‘Salary’]*2
```

Q24. How do you remove duplicates from a DataFrame?

```
df.drop_duplicates()
```

Q25. What is the difference between .loc and .iloc in Pandas?

In .loc, we need to give column names ans in .iloc, we need to give index numbers.