Q1)

```
import pandas as pd
from sklearn.model_selection import train_test_split
from sklearn.tree import DecisionTreeRegressor
from sklearn.svm import SVR
from sklearn.neighbors import KNeighborsRegressor
from sklearn.metrics import r2_score
from sklearn.preprocessing import StandardScaler



data = pd.read_csv('petrol_consumption.csv')
data

X = data.drop('Petrol_Consumption', axis=1)
y = data['Petrol_Consumption']

X_train, X_test, y_train, y_test = train_test_split(X, y, test_size=0.2)

scaler = StandardScaler()
X_train = scaler.fit_transform(X_train)
X_test = scaler.transform(X_test)

dt_model = DecisionTreeRegressor(random_state=42)
dt_model.fit(X_train, y_train)
y_pred_dt = dt_model.predict(X_test)
```

```
print("prediction is:" ,y_pred_dt)

svm_model = SVR(kernel='rbf')
svm_model.fit(X_train, y_train)
y_pred_svm = svm_model.predict(X_test)
print("prediction is:" ,y_pred_svm)

knn_model = KNeighborsRegressor(n_neighbors=5)
knn_model.fit(X_train, y_train)
y_pred_knn = knn_model.predict(X_test)
print("prediction is:" ,y_pred_knn)

print("Decision Tree R2:", r2_score(y_test, y_pred_dt))
print("SVM R2:", r2_score(y_test, y_pred_svm))
print("KNN R2:", r2_score(y_test, y_pred_knn))
```

Q2)

```
import pandas as pd
data = {
    'Name': ['Amit', 'Priya', 'Rahul', 'Sneha', 'Vikas'],
    'Age': [25, None, 30, 28, None],
    'City': ['Pune', 'Mumbai', None, 'Delhi', 'Chennai'],
    'Salary': [35000, 40000, None, 38000, 42000]
}

df = pd.DataFrame(data)
print("Original Dataset:")
print(df)

print("\nNull Values in Each Column:")
print(df.isnull().sum())

df_cleaned = df.dropna()

print("\nDataset After Removing Null Values:")
print(df_cleaned)
```