Forecasting Stock Price

For the given "SBI_Historical_Data". Below is the data description:

Column	Description
Date	date on which data is recorded
Price	Unique number assigned to each category of the video
Open	current day open point
High	current day highest point
Low	current day lowest point
Vol	the amount of a security that was traded during a given period of time. For every buyer, there is a seller, and each transaction contributes to the count of total volume.
Change %	% change in the current value and the previous day's market close

Perform the following tasks:

Q1. As part of EDA, perform the following tasks:

a. **Print dimensions of the data**
b. **Dimensions of Dataset**
c. **Statistical Summary**
d. **Converting Date**
e. **Check Data Type and Missing Values**
f. **Index the dataset with Date**

Q2. Perform time series analysis:

a. **Visualize time series data**
b. **Check Stationarity with**

- ADF Test

- KPSS Test

c. **Perform decomposing**

Q.3 Forecast about the stock price using ARIMA. Steps to be performed:

a. **Parameter Selection using gridsearch**
b. **Fit ARIMA model as per the selected optimum value of parameters**
c. **Validate forecast**
d. **Calculate the MSE and RMSE**
e. **Visualize the forecast**