\* We cannot use train test split in time series, we simply define that take upper 70% records for train the model and take below remaining 30% for testing the model.

\* We use only sequential data for time series.

\* Time series has a very limited scope. It is a topic that is typically only asked in interviews by companies that work on time series data or that need time series analysis. Machine learning, deep learning and SQL are more general topics that are asked in interviews for a wider range of roles.

\* **Not every problem statement requires the application of time series analysis.** Machine learning (ML) and deep learning (DL) are more general techniques that can be applied to a wider range of problems. Time series analysis is specifically designed for problems that involve time-dependent data.

\* For example: - Portfolio Management Firms, brokerage firms like Motilal Oswal, Angel Broking they requires time series.

Interview Question: -

Q1) What is stationarity data?

Q2) Why it is important to convert non-stationarity data into stationarity?

Q3) How to check that data is stationarity or non-stationarity?

Q4) If you have non-stationarity data then how will you convert it into stationarity?

Q5) What is moving average and why it is important?

A) It indicates the direction of the average stock price movement over the past **n** number of days. This is helpful because if the stock price is below its 200-day average moving price, it is considered to be undervalued and may be a good time to buy it.

\* If stock prize is above than its 200 days moving average, it means stock prize is overvalued.

\* By this we can get idea of stock price by using moving average. It indicates that where to buy or sell a particular stock.

Q6) What is the difference between time series and regression?

A) In regression, we use independent variables to predict a target variable. In time series analysis, we use past values of the target variable to predict future values of the target variable. This is called autoregression / autoregressive modelling.

\* If we apply regression using only 2 variables, it will not give good results.

Q7) How to visualize data of specific time period?  
A) By using **xlim** function.

Q8) How to data of last day for each year?

Using **data.resample(Rule=’A’)**

Q9) How to fetch minimum value of all variable for each year?

Using **data.resample(Rule=’A’).min()**

Q 10) How to fetch maximum value of all variables for each year?  
Using **data.resample(Rule=’A’).max()**

Q11) Difference between seasonality & cyclic variations?

Q12) Why do we need to study time series forecasting? What are the things that machine learning (ML) and deep learning (DL) cannot solve, so we turn to time series forecasting?

Q13) In time series we predict the target variable and in ML we also predict the target variable. So, why we use time series instead of ML?

Q14) How time series is different from regression? (Imp. I.Q)

Q15) What is time series analysis?

**Q16) What is forecasting?**

Q17) Why decomposition of data is required?

Q18) What is auto regression in ARIMA?

Q19) What is integrated in ARIMA?