**1) Give three real life example of skewness and kurtosis**

**Ans:-1**

**3 real life example of of skewness and Kurtosis are :-**

1. **Cricket Score :-** Cricket score is one of the best examples of skewed distribution. Let us say that during a match, most of the players of a particular team scored runs above 50, and only a few of them scored below 10. In such a case, the data is generally represented with the help of a negatively skewed distribution. Similarly, a positively skewed distribution can be used if most of the players of a particular team score badly during a match, and only a few of them tend to perform well.
2. **Exam Results :-** The representation of exam results forms a classic example of skewed distribution in real life. The distribution of scores obtained by the students of a class on any particularly difficult exam is generally positively skewed in nature. This is because due to the increased difficulty level of the exam, a majority of students tend to score low, and only a few of them manage to score high. Similarly, the distribution of scores obtained on an easy test is negatively skewed in nature because the reduced difficulty level of the exam helps more students score high, and only a few of them tend to score low.
3. **The human life cycle:-** is a classic example of asymmetrically distributed data. This is because most people tend to die after reaching an average age, while only a few people die too soon or too late. If such data is plotted along a linear line, most of the values would be present on the right side, and only a few values would be present on the left side. Hence, the representation is clearly left or negatively skewed in nature.

**3 real life examples of Kurtosis:**

1. **Capital Investment** :- For investors, high kurtosis of the return distribution implies the investor will experience occasional extreme returns (either positive or negative), more extreme than the usual + or - three standard deviations from the mean that is predicted by the normal distribution of returns. This phenomenon is known as kurtosis risk.
2. **Astronomy :-** An amateur astronomer has data from different sky sectors, giving different data sets on things that a radio telescope measures. Calculate the kurtosis for each variable/sector. High values again are worth investigating further (are intelligent beings contacting us?
3. **Supervising a firm :-** A quality control supervisor may have quality data on many different variables, over many different shifts/plants. Calculate the kurtosis for each variable/plant/shift (many kurtosis values). The higher kurtosis values indicate problem areas that require further investigation.