



# GALGOTIAS UNIVERSITY

## All Programs Semester I CAT II – January 2022

### Answer uploading Template

Enrolment / Admission No. of Student	21SCSE1010662	Name of Course	B.Tech CSE
Name of Student	Shivam Puri	Course Code	BCSOIT1001
Program		Date of Examination	15-01-22
Semester	I <sup>st</sup>	Time	08:00
Signature of Student	<u>Shivam</u>		

Student shall start writing from below:

1st) The term variance refers to a statistical measurement of the spread between numbers in a data set. More specifically, variance measures how far each number in the set is from the mean and thus from each every other number in the set. Variance is often depicted by this symbol:  $\sigma^2$ .

Ans 2) Tableau can connect to all the popular data sources which are widely used. Tableau's native connectors can connect to the following type of data sources :-

- 1) File systems such as CSV, Excel, etc.
- 2) Relational systems such as Oracle, SQL Server, DB2, etc.
- 3) Cloud Systems such as Windows Azure, Google Big Query, etc.
- 4) Other sources using ODBC.

Ans 3)

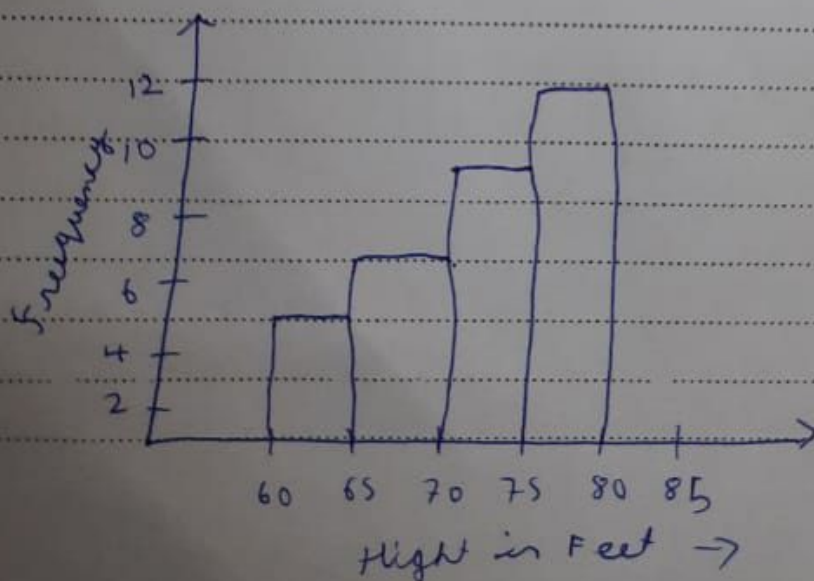
Step to create histogram for the given data is as follows:-

Step 1: Draw and label your x-axis & y-axis i.e. place height of trees in y-axis (vertical) & Height ranges in x-axis horizontal column

Step 2: choose the no of bins in this given problem we have given 4 ranges then we need 4 bars, we need to select 4 bins

Step 3) Divide 100 by the no of bars points to get an idea of where to place frequency ticks.

Step 4) After defining no of bins and frequencies count no of data sets and plot them in the particular bin according to its range.





4 Ans > -

A scatter plot can also be useful for identifying other patterns in data. We can divide data points into groups based on how closely sets of points cluster together. Scatter plots can also show if there are any unexpected gaps in the data and if there are any outlier points.

Benefits of Scatter Diagram.

It shows the relationship between two variables.

It is the best method to show you a non-linear pattern.

The range of data flow, like the maximum and minimum value, can be determined. Patterns are easy to observe.

Plotting the diagram is simple.

Scatter diagrams are useful in determining the relationship between two variables. This relationship can be between two causes, or a cause and an effect. It can be positive, negative, or have no correlation at all. The first variable depends on the first. To analyse the pattern of the relationship, you change the independent variable and monitor the changes in the dependent one.

Ans 5 →

A pivot table is a statistical tool that summarizes and reorganizes selected columns and rows of data in a spreadsheet or database table to obtain a desired report.

order ID	Product	category	Amount	Date	country
1	Banana	Fruit	8,384	1/10/2022	Canada
2	Beans	Vegetables	2,626	17/04/2022	Australia
3	Oranges	Fruit	3,610	18/10/2021	France
4	Broccoli	Vegetables	9,062	24/08/2021	India
5	Apple	Fruit	2,417	14/03/2021	Nepal

Steps of inserting a pivot table, execute the following steps:

1. Click any single cell inside the data set.
2. On the Insert tab, in the Tables group, click Pivot Table.
3. The following dialog box appears. Excel automatically selects the data for you. The default location for a new pivot table is New Worksheet.
- 3> Click OK.



Ans 67-

Effective use of waterfall charts:

Waterfall charts are used to visually illustrate how a starting value of something (say, a beginning monthly balance in a checking account) that becomes a final value (such as the balance in the account at the end of the month) through a series of intermediate additions (deposits, transfers in) and subtractions.