Q1 Develop a spread sheet in MS EXCEL to compute the standard regression estimates for the set of fifteen observations: candidate **can assume any values between 20 and 100**.

Y (dependant) X(independent) Estimated Y

You required to find the estimated values of Y series, given that Y = a + b*X, What shall be the value of Y when the value of X=70. Give an appropriate Graphical representation of the regression line.

Q2 Prepare a spread sheet in MS EXCEL to classify 50 given numbers (varying between 1 to 100, Generated at Random) according to the following class intervals of 10 starting with 1-10,and ending with 81 and Above. Compute the statistical parameters such as mean and standard deviation both on the basis of discrete data and above frequency distribution. **Before Preparing frequency table fix the random numbers in another area and use fixed numbers to prepare frequency table.**

Q 3 You are given the output of a product for the following four quarters. .
I- Jan to Mar; **II** Apr to Jun; **III** Jul to Sep; **IV** Oct to Dec

Year	I	II	III	IV	Total
1997	34	54	98	224	
1998	37	58	93	228	
1999	39	56	95	236	
2000	36	59	99	250	
2001	33	53	87	256	
2002	37	58	96	254	
2003	38	50	92	290	
2004	37	55	94	280	

Required:
Develop a spreadsheet to conduct the trend series analysis for each year, by utilizing the standard technique of least square regression. Compute the estimated output for the year 2005 and also depict the actual and estimated output using a suitable graph:

Q 4 Prepare a spread sheet in MS EXCEL to classify 50 given numbers (varying between 1 to 100, Generated at Random) according to the following class intervals. Before creating frequency distribution fix the random numbers.

Class Intervals	Frequency
0 - 20	
20 - 40	
40 - 60	

60 - 80	
80 and Above	
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total	

Required:

- Prepare a pie chart for the above frequency distribution
- Compute the statistical parameters such as mean and standard deviation both on the basis of discrete data and above frequency distribution.
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Q 5 Develop a spread sheet to conduct the following trend series analysis by utilizing the standard technique of least square regression.

Years	Actual Output	Estimated Output
1995	69	
1996	72	
1997	77	
1998	82	
1999	91	
2000	85	
2001	97	
2002	104	
2003	110	
2004	117	
2005	127	

What shall be trend value of output for the year 2007? Also draw a regression line.

Q 6 Develop a spread sheet in MS EXCEL to compute the standard regression estimates for the following set of data

Y	X	Estimate
138	90	
129	76	
146	97	
149	109	
139	93	
136	85	
142	90	

You required to find the estimated values of X series, given that $X = a + b * Y$, What shall be the value of X when the value of Y=152. Give an appropriate Graphical representation of the actual and estimated series of Y.

Q 7 . Develop a spread sheet to conduct the following trend series analysis by utilizing the standard technique of least square regression.

Years	Actual Output	Estimated Output

1995	70
1996	72
1997	79
1998	82
1999	81
2000	85
2001	97
2002	104
2003	110
2004	117
2005	120

What shall be trend value of output for the year 2009? Prepare a suitable graph to depict actual and estimated output year-wise

Q 8 . Prepare a spread sheet in MS EXCEL to classify 50 given numbers (varying between 1 to 150, *Generated at Random*) according to the following class intervals:

Class Intervals				**Frequency**
1	-	20		
20	-	40		
40	-	60		
60	-	80		
80	-	100		
> 100				
TOTAL				

Required:

- Prepare a pie chart for the above frequency distribution
- Compute the statistical parameters such as mean and standard deviation both on the basis of discrete data and above frequency distribution.

Q 9 . It has been observed that the degree of ***rainfall*** determines the volume of ***Sugarcane*** which in turn effects the production of ***Sugar***. Develop a spread sheet in MS EXCEL to compute the estimated output of Sugarcane and Sugar for a particular region for the following set of data:

Rainfall (in mm)	**Sugarcane (in tons)**	**Production of Sugar (in tons)**
176	1802	530
98	1526	365
110	1945	482
105	2102	624
99	1844	525
72	1665	396
102	1804	515

You required to find the ***estimated production levels of Sugar*** when the predicted values of **rainfall** is **120mm.** Give an appropriate ***graphical representation*** of the estimated values of output of **Sugarcane** and **Sugar**.

Q 10 Develop a spread sheet to conduct the following trend series analysis by utilizing the standard technique of least square regression.

Years	**Actual Output**	**Estimated Output**
1991	138	
1992	144	
1993	154	
1994	164	
1995	182	
1996	170	
1997	194	
1998	208	
1999	220	
2000	234	
2001	254	

What shall be *trend value* of output for the year **2005**? Prepare a suitable graph to depict **actual** and **estimated output**.

Q 11. Develop a spread sheet in MS EXCEL to compute the standard regression estimates for the following sets of data:

X	**Y**
Rain fall(CM)	**output of sugar cane(MT)**
38	90
29	76
46	97
49	109
39	93
36	85
42	90

You are required to find the estimated values of Y series, given that
Y = a + b.* X. What shall be the value of Y when the value of Z=52. Give an appropriate Graphical representation of the actual rainfall and estimated production of Sugar Cane.

Q12. Prepare a spread sheet in MS EXCEL to classify 50 numbers (varying between 100 to 500) that have been generated at random according to the following class intervals:

Class Intervals	Frequency
100 - 200	
200 - 400	
400 - 600	
600 - 800	
800 - 900	
800 and Above	

Required:

- Prepare a pie chart for the above frequency distribution
- Compute the statistical parameters such as mean and standard deviation both on the basis of discrete data and above frequency distribution.

Q 13 Develop a spread sheet in MS EXCEL to compute the standard regression estimates for the following set of data:

Y	X	Estimate
138	190	
129	176	
146	197	
149	209	
139	193	
136	185	
142	190	

You required to find the estimated values of X series, given that $X = a + b*Y$, What shall be the value of X when the value of Y=152. Give an appropriate Graphical representation of the actual and estimated series of X.

Q 14Prepare a spread sheet in MS EXCEL to classify 80 given numbers (varying between 1 to 150, Generated at Random) according to the following class intervals:

Class Intervals	Frequency
0 - 20	
20 - 40	
40 - 60	
60 - 80	
80 - 100	
100 - 120	
120 and Above	
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total	

Required:

- Prepare a pie chart for the above frequency distribution

- Compute the statistical parameters such as mean and standard deviation both on the basis of discrete data and above frequency distribution.