JAIPURIA INSTITUTE OF MANAGEMENT, NOIDA
PGDM / PGDM (SM) / PGDM (M), BATCH 2017 – 19, TRIMESTER- I
MID – TERM EXAM, AUGUST, 2017
SUBJECT: Quantitative Analysis for Management-I

TIME: 1 hour **Max. Marks: 20**

INSTRUCTIONS: All questions are compulsory. Use of calculator is permitted.

1. The following are the results of descriptive statistics for the stock prices of the two companies, SBI and Citibank.

SBI	
Mean	1530.72727
Standard Error	131.26448
Median	162
Quartile 1	137
Quartile 3	184
Mode	189
Standard Deviation	435.355048
Sample Variance	189534.018
Kurtosis	1.242472333
Skewness	-1.2577
Range	144
Minimum	56
Maximum	200
Sum	16838
Count	11

Citibank	
Mean	1572.72
Standard Error	154.793
Median	175
Quartile 1	1334.5
Quartile 3	1839.5
Mode	78
Standard Deviation	513.391
Sample Variance	263570.8
Kurtosis	-0.0063
Skewness	-0.102
Range	172
Minimum	78
Maximum	250
Sum	17300
Count	11

Based on the above data, answer the following questions:

a) Define five-point summary and its use in any statistical analysis. How it can be used for comparing SBI and Citibank. (3)

b) Do we have any evidence for either of the organization to have a symmetric distribution of stock prices? Which share you choose to invest without taking any risk? (3)

c) Describe the shape of the distribution of stock prices of SBI. Do the results suggest that there is a great deal of variation in quantity within the stock prices? (2)

2. A statistics professor classifies his students according to their grade point average (GPA) and their gender. The accompanying table gives the proportion of students falling into the various categories.

Gender/ GPA	**Under 2.0**	**2.0 – 3.0**	**Over 3.0**
Male	0.05	0.25	0.10
Female	0.10	0.30	0.20

One student is selected at random.

a) If the GPA of the student selected is over 3.0, what is the probability that the student is male? (2)

b) What is the probability that the student selected is female or has a GPA under 2.0 or both? (2)

c) Is GPA independent of gender? Explain using probabilities. to increased security precautions. (2)

3. An aircraft emergency locator transmitter (ELT) is a device designed to transmit a signal in the case of a crash. The Altigauge Manufacturing Company makes 80% of the ELTs, the Bryant Company makes 15% of them, and the Chartair Company makes the other 5%. The ELTs made by Altigauge have a 4% rate of defects, the Bryant ELTs have a 6% rate of defects, and the Chartair ELTs have a 9% rate of defects (which helps to explain why Chartair has the lowest market share). If an ELT is randomly selected from the general population of all ELTs, find the probability that it was made by the Altigauge Manufacturing Company. (3)

4.

a) What is the importance of presenting the data? Compare different methods of presenting the data based on the need of the situation at hand. (1.5)

b) The following table shows the number of employees located at different regions for a manufacturing company. Construct a bar chart from the data given. (1.5)

Region	Employees
Raipur	100
Nagpur	120
Indore	60
Bhopal	76
Gwalior	80
Kanpur	140
Bilaspur	50