K J SOMAIYA INSTITUTE OF MANAGEMENT STUDIES & RESEARCH

PGDM B TRIMESTER (I) ENDTERM EXAMINATION

BUSINESS STATISTICS

Date 21st September 2018 TIME DURATION: 2.30 HRS TOTAL MARKS: 50

NOTE:

1. Write detail analysis in the answer sheet for Q3 to Q5.
2. Present Q1 and Q2 in the word document.
3. Kindly make assumptions, if any.
4. Refer to the excel file for relevant data.
5. All questions carry equal marks.

Q.1 Returns on NETFLIX, SANDISK, SIRIUS XM RADIO and WYNN RESORTS are reported in the NASDAQ Excel Sheet.
For the Following Combination of investment decide,

1. Which portfolio would a Gamble choose?
2. Which portfolio would a risk-averse investor choose?
3. Use Graphical technique to highlight the movement of stocks.

	NFLX	SNDK	SIRI	WYNN
Plan 1	25%	25%	25%	25%
Plan 2	15%	15%	15%	55%
Plan 3	20%	20%	50%	10%

Q.2. Refer to Survey data excel sheet, and create report using visual statistics

Q.3.

a. Find P(395.4< $\bar{X}$ <404.6), if the population mean=400, $\sigma_{\bar{x}}$ =20 and n=100
b. A random sample of size 1,000 is taken from a population where p=.20. What is ($\sigma_{\hat{p}}$)?
c. A sample statistic is an unbiased point estimate of a population parameter if the mean of the populations of all possible values of the sample statistic equals the population parameter. Explain.
d. Explain central limit theorem.
e. Suppose that the waiting time for a license plate renewal at a local office of a state motor vehicle department has been found normally distributed with a mean of 30 minutes and a standard deviation of 8 minutes. Suppose that in an effort to provide better service to the public, the

director of the local office is permitted to provide discounts to those individuals whose waiting time exceeds a predetermined time. The director decides that 15% of the customers should receive this discount. How long do they need to wait to receive the discount.

Q. 4. More professional women than ever before are foregoing motherhood because of the time constraints of their careers. Yet, many women still manage to find time to climb the corporate ladder and set time aside to have children. A survey of 187 attendees at Fortune Magazine's most powerful women in Business summit in March 2002 found that 133 had at least one child. Assume that the group of 187 women is a random sample from the population of all successful women executives.

a. What is the sample proportion of successful women executives who have children?
b. At the 0.07 level of significance, can you state that more than half of all successful women executives have children?
c. Estimate confidence interval at 88% confidence level.

Q.5 Consumers spent an average of 530 on a meal at a restaurant (Survey, 2016), assume that the data is normally distributed and the standard deviation is 70,

a. What is the probability that randomly selected person spent more than 600 rupees?
b. What is the probability that randomly selected person spent between 500 and 530?
c. Between what two values the middle 90% of the amount spent fall?