C.U.SHAH UNIVERSITY
Summer Examination-2018

Subject Name : Quantitative Techniques for Management

Subject Code : 5MS01QTM1   **Branch:** MBA

Semester : 1   **Date :** 19/03/2018   **Time :** 02:30 To 05:30   **Marks :** 70

Instructions:
(1) Use of Programmable calculator and any other electronic instrument is prohibited.
(2) Instructions written on main answer book are strictly to be obeyed.
(3) Draw neat diagrams and figures (if necessary) at right places.
(4) Assume suitable data if needed.

SECTION – I

Q-1	**Attempt the Following questions**	**(07)**
a.	What do you mean by Statistics?	**01**
b.	Define Population	**01**
c.	Explain the concept of Sample	**01**
d.	What do you mean by Inferential Statistics?	**01**
e.	Define Parameter	**01**
f.	Write the denotation of : (1) Population mean (2) Population Variance	**01**
g.	What do you mean by Descriptive Statistics?	**01**

Q-2	**Attempt all questions**	**(14)**
(a)	Cite the examples of the use of statistics in several areas of business	**07**
(b)	Construct an example and Explain the concept – Stem and Leaf Plots	**07**

OR

Q-2	**Attempt following questions**	**(14)**
(a)	Discuss the Data Measurement Scales	**07**
(b)	Construct an example and Explain the concept – Pie Chart	**07**

Q-3

The following data are the average weekly mortgage interest rates for a 60-week period.   **14**

7.29	6.69	6.98	7.39	7.11	7.30	7.16	6.87	7.08	6.96	7.02	6.99
7.03	7.02	7.56	7.28	6.95	7.17	6.78	6.80	7.24	6.70	7.40	6.94
7.14	7.40	6.75	6.97	7.23	6.96	6.79	7.10	7.34	6.57	7.12	7.29
6.77	7.16	6.87	6.90	7.31	6.78	7.07	7.13	7.47	6.88	7.16	7.05

| 6.35 | 6.96 | 7.11 | 6.57 | 7.00 | 7.30 | 7.03 | 6.95 | 7.31 | 6.84 | 7.16 | 6.84 |

Construct a frequency distribution for these data using 13 classes.
Calculate and display class midpoints, relative frequencies and cumulative frequencies for this frequency distribution

OR

Q-3   **Attempt all questions**

(a)   The following data represent the costs (in rupees) of a sample of 30 postal   **07**
mailings by a company. Using Rupees as a Stem and Paisa as Leaf, construct a
Stem and leaf plot of the data

3.67	2.75	5.47	4.65	3.32	2.09
1.83	10.94	1.93	3.89	7.20	2.78
3.34	7.80	3.20	3.21	3.55	3.53
3.64	4.95	5.42	8.64	4.84	4.10
9.15	3.45	5.11	1.97	2.84	4.15

(b)   Following are the sales data of A, B, C and D Zones of XYZ Organization.   **07**
Construct the pie chart for following data.

A	17918.6
B	15191.9
C	7617.6
D	2553.6
Total	43281.7

SECTION – II

Q-4   **Attempt the Following questions**   **(07)**
    a. Write the computational formula for Coefficient Variance   **01**
    b. What do you mean by Independent Event?   **01**
    c. Explain the concept : Correlation   **01**
    d. Write the computational formula for population variance   **01**
    e. Define Probability   **01**
    f. What do you mean by Range?   **01**
    g. Write the computational formula for sample variance   **01**

Q-5   **Attempt all questions**   **(14)**
(a)   The number of U.S. cars in service by top car rental companies in a recent year   **07**
according to Auto Rental News Follows.
Compute the Mode, the Median, the Mean.

Company	No. of Cars in Service
Enterprise	460000
Hertz	350000
ANC Rental Group	322000
Avis	220000
Budget	146000
Dollar	78000

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Thrifty	51000
U-Save	15000
Toyota	12000
Rent-a-Wreck	12000
Advantage	12000
Payless	8000
ACE	8000

(b) Determine the value of Q1, Q2 and Q3 for following number **07**

106   109   114   116   121   122   125   129

OR

Q-5

Following data represents the value for interest rates of funds and commodities **14**
future index for a sample of 12 days. compute a correlation coefficient (r)

Day	Interest (x)	Future Index (y)
1	7.43	221
2	7.48	222
3	8.00	226
4	7.75	225
5	7.60	224
6	7.63	223
7	7.68	223
8	7.67	226
9	7.59	226
10	8.07	235
11	8.03	233
12	8.00	241

Q-6 **Attempt all questions** **(14)**
(a) Discus the three general methods of assigning probabilities **07**
(b) Explain the concepts (1) Regression Analysis (2) Time Series **07**

OR
Q-6 **Attempt all Questions** **(14)**
(a) Write a Note on : Assignment Problem **07**
(b) Discuss the advantages of Transportation Problem **07**