Enrollment No: _____   Exam Seat No:_____

C.U.SHAH UNIVERSITY
Winter Examination-2022

Subject Name : Business Statistics

Subject Code : 4CS01ABS1   **Branch: BCA**

Semester: 1   **Date: 03/01/2023**   **Time: 11:00 To 01:30**   **Marks: 70**

Instructions:
   (1) Use of Programmable calculator & 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.

Q-1   **Attempt the following questions:**   **(14)**

a)   **Arithmetic Mean for 4,2,2,7,5 is _____**   1
   a. 3
   b. 4
   c. 5
   d. None of These

b)   **Which method is useful to compare long term variations in the values of the variable?**   1
   a. Chain base Method   b. Laspeyre's Method
   c. Fixed base Method   d. None of these

c)   **_____ is not type of Mean.**   1
   a. Arithmetic   b. Harmonic
   c. Geometric   d. Standard Deviation

d)   **In correlation value of rank coefficient between _____ to_____**   1
   a. -1,1   b. 1,0
   c. 0, -1   d. None of these

e)   **12,22,23,24,22,18,10 called as _____ data.**   1
   a. Grouped   b. Un-Grouped
   c. Alternate   d. None of these

f)   **--------------- is not a Statistical Method.**   1
   a. Scatter Diagram   c. K-MAP
   b. Correlation   d. Regreesion

g)   **A _____ correlation method present X and Y values in form of Graph.**   1
   a. Scatter Diagram   c. Karl Pearson Correlation
   b. Spearman Rank Correlation   d. None of these

h)   **ANOVA Stands for-_____**   1
   a. Analysis of Variable   c. Analysis of Variance
   b. Analysis of Varity   d. Analysis of Vertical Data

i)   **_____ is a Statistical Software.**   1
   a. AMPIRE   c.WIDE
   b. SPSS   d.None of these

j)   **_____ is testing method in statistics.**   1

a Beta   c. ANOVA
b.ALPHA   d. None of these

k) Define: Mean   1

l) Write down the formula for Standard Deviation.   1

m) Write down the formula for Spearman Rank Correlation.   1

n) Define: Mode   1

Attempt any four questions from Q-2 to Q-8

Q-2   **Attempt all questions**   **(14)**

(A)   What is Scatter Diagram? Draw and Explain Each Correlation Scatter Diagram.   **(7)**

(B)   **Find out the Arithmetic mean for ungrouped data of 20 observations are**   **(7)**
88,82,81,77,75,76,89,87,88,81,77,74,66,92,91,78,76,77,68,93

Q-3   **Attempt all questions**   **(14)**

(A)   The data about wholesale prices of wheat in a region are as follows. Taking the   **(7)**
year 2005 as the base year, prepare the index numbers for the price of the item for
remaining years. State the percentage increase in the price of wheat in the year
2013 from these index number.

Year	2005	2006	2007	2008	2009	2010	2011	2012	2013
Price per Quintal(Rs.)	1650	1690	1730	1750	1810	1850	1870	1900	1950

(B)   The data about bi-monthly closing prices of shares of a company in the year 2014 **(7)**
are given. compute the chain base index numbers from these data.

Month	January	March	May	July	September	November
Price	22	21.20	22	23	24.70	26.00

Q-4   **Attempt all questions**   **(14)**

(A)   Calculate the Karl Pearson's Correlation Coefficient between height and weight   **(7)**
form the following data.

Height	48	49	50	51	52	53	54	55	56
Weight	98	100	88	102	95	125	120	110	125

(B)   Calculate Spearmen Rank Correlation Coefficient for the following data   **(7)**

X	60	72	42	40	45	50	60	61	66
Y	35	30	52	60	48	50	36	35	22

Q-5   **Attempt all questions**   **(14)**

(A)   Find Correlation Coefficient using regression Coefficients from the following   **(7)**

data:

X	10	11	12	5	6	8	2	3
Y	12	13	15	7	9	10	4	6

(B) Compute Two Regression Coefficients from Following Data **(7)**

X	21	22	23	24	25	26	27	28	29	30
Y	17	19	19	20	23	24	27	20	28	27

Q-6 **Attempt all questions** **(14)**

(A) A Survey has been conducted by a group of students on 20 households in a locality shown in following frequency distribution table. Find out the mode for following data: **(7)**

Size of Family	1-3	3-5	5-7	7-9	9-11
No. of Families	7	8	2	2	1

(B) **Find out the mean, Median and Mode for following ungrouped data** **(7)**
2,6,4,5,0,2,1,3,2,3

Q-7 **Attempt all questions** **(14)**
(A) Find out the Standard Deviation for following data: **(7)**
4,2,5,8,6
(B) Explain merit and limitations of Rank Correlation. **(7)**

Q-8 **Attempt all questions** **(14)**
(A) What is Annova? Explain in brief. **(7)**
(B) What is Hypothesis? Explain its types in brief. **(7)**