# Exam Seat No: C.U.SHAH UNIVERSITY Summer Examination-2016 

Subject Name : Business Statistics
Subject Code : 4MS02BST1
Branch: BBA
Semester : 2 Date : 09/05/2016 Time : 10:30 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:
a) Define sample.
b) Define complementary event.
c) Write parameters of population.
d) Define two tailed test.
e) Define population.
f) Define mutually exclusive event.
g) Function of sample observation is called $\qquad$
h) Give meaning of co-relation.
i) Define experiment.
j) What is null hypothesis?
k) Find mean of $15,20,48,51$ and 60
l) Define probability.
m) Define statistics.
n) Define one tailed test.

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

Q. 2 Attempt all questions
a) Explain scaling techniques.
b) Explain types of correlation.
Q. 3 Attempt all questions
a) Write a note on Skewness \& kurtosis. 7
b) Explain types of graphs.

## Q. 4 Attempt all questions


a) Write a note on Role of statistics in business.
b) The incomes and expenditure of a business concern (in thousand rupees) have been given below.

| Year |  | $\mathbf{2 0 0 1}$ | $\mathbf{2 0 0 2}$ | $\mathbf{2 0 0 3}$ | $\mathbf{2 0 0 4}$ | $\mathbf{2 0 0 5}$ | $\mathbf{2 0 0 6}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Income |  | 22 | 27.3 | 28.2 | 30.3 | 32.7 | 33.3 |
| Expenditure |  | 19.5 | 21.7 | 30 | 25.6 | 26.1 | 34.2 |

Represent the given data by multiple bar-diagram.

## Q. 5 Attempt all questions

a) A box contains 4 white and 6 black bolls. A person draws 2 balls and is given Rs. 14 for every white ball and Rs. 7 for every black ball. What is the expectation?
b) The average weight of 1000 boys of a collage is 52 kg . and its s.d. is 3 kg . Assuming the weight to be normally distributed, find the number of boys with weight s between 48 and 53 kg .
Q. 6 Attempt all questions
a) Define probability and explain conditions of probability.
b) Explain null and alternate hypothesis. 7
Q. 7 Attempt all questions

Find the coefficient of correlation between X and Y by taking deviation from actual means:

| $\mathbf{X}$ | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :---: |
| $\mathbf{Y}$ | 4 | 5 | 6 | 8 | 9 | 7 | 10 |

## Q. 8 Attempt all questions

Two random samples of sizes 9 and 7 respectively are drawn from two different populations. The means of the samples are 196.4 and 198.8 respectively. The sum of the squares of deviations from their respective means are 26.94 and 18.73. Test the hypothesis that population means are equal.


