Day: **Wednesday**   Time: **02.00 PM TO 05.00 PM**

Date: **01/11/2017**   Max. Marks: 60

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N.B.:

1) Question **No. 1** and Question **No. 5** are **COMPULSORY**. Out of the remaining attempt **ANY TWO** from each section.
2) Both the sections should be solved in **SEPARATE** answer books.
3) Use of programmable **CALCULATOR** is allowed.
4) Figures to the right indicate **FULL** marks.

SECTION – I

Q.1 Answer the following: (10)

a) Given A= {a, b, c, d, e, f }   B= {c, e, x, y }
Find A∩B and A∪B.

b) State the formula for variance.

c) In a binomial experiment n=5, p=0.45. What is the probability of r=0 successes.

d) A contingency table has 5 columns and 4 rows. What is the degrees of freedom?

e) Value of correlation coefficient lies between _____ and____.

Q.2 Answer the following: (10)

a) Find the mean, mode and median.

11.1	11.3	11.7	11.6	11.5	11.3	11.2	11.6	11.9	11.8
11.5	11.5	11.7	11.7	11.5	11.6	11.5	11.7	11.5	11.5

b) Fruits were classified as under when consignment was received.

	Large	Medium	Small
Hard	25	45	15
Soft	30	30	10

Use the information to find all marginal probabilities and conditional probabilities.

Q.3 What is scatter diagram? Explain how to get the exponential, power-law and linear fits to a set of paired observations (x,y) using the ADD TRENDLINE tool, on a spread sheet. (10)

OR

Explain the applications of Binomial distribution and Normal distribution in life sciences.

Q.4 Write short notes on: (10)

a) Multi stage sampling

b) Paired t- test

P.T.O.

SECTION - II

Q.5   Answer the following: **(10)**

    a) Why statistical data analysis is important?
    b) Write the symbol for addition and average of spread sheet.
    c) Define SPSS.
    d) How regression functions?
    e) Statistics is applied branch of science. Why?

Q.6   Answer the following: **(10)**

    a) Define rank correlation. Give an illustration of its use.
    b) Define a random variable and its expected value.

Q.7   Answer the following: **(10)**

    a) Why we need to give Data-Names to selected data ranges on a spread sheet. Discuss the process of Naming and how to use the named data in functions.
    b) Discuss how to import data from a spread sheet into SPSS.

Q.8   Discuss the objectives and steps in computation of Chi-Square test.   **(10)**
OR
Discuss the objectives and steps in computation of Multiple linear regressions.

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