A marketing research firm wishes to compare the prices of Hard disk charged by two companies; HP and SanDisk. The research firm, using a standardized one-week purchase plan, makes identical purchases of ten hard disks from both company's stores. The stores for each company are randomly selected, and all purchases are made during a single week. The purchase expenses obtained at the SanDisk are given below. Compute lower and upper quartile for the prices of SanDisk. It has been observed that average purchase price at HP stores is $114.81 with variation of $s^2 = (1.84)^2$. Compare the two companies and comment on the consistency in prices.

| | 1 | 3 | 6 | 2 | 5 | 10 | 4 | 7 | 9 | 8 |
|---|---|---|---|---|---|---|---|---|---|---|
| SanDisk | 119.25 | 121.32 | 122.34 | 120.14 | 122.19 | 123.71 | 121.72· | 122.42 | 123.63 | 122.44 |

(Marks=15)

## QUESTION :

(Marks=6+4)

During a particular period, a university's information technology office received 20 service orders for problems with printers, of which 6 were laser printers and 14 were inkjet models. A sample of 4 of these service orders is to be selected for inclusion in a customer satisfaction survey.

a)  Construct the probability distribution for the number of selected service orders of laser printers.
b)  What is the expected number of service orders of laser printers? Also find variance.

Quiz-2                                                                                    (BCS-4E)

## QUESTION:                                                                 (Marks=10)

A binary digital communication channel is a system that carriers data in the form of one of two types of signals. either 0's or 1's. Because of noise, a transmitted "0" is sometimes received as a "1" and a transmitted "1" is sometimes received as a "0". Assume that for a certain binary communication channel, Event "R" be the event of received symbol and Event "T" be the event of transmitted symbol,

The Probability a "0" was received given a "0" was transmitted is 0.95
The Probability a "1" was received given a "1" was transmitted is 0.9
Probability a zero is transmitted is 0.4.
Determine Probability a "1" was transmitted given a "1" was received.