

Code No: R21052

R10

SET - 4

6. a) Explain χ^2 - test for independence of attributes.
 b) A company wishes to test whether its three salesmen A, B and C tend to make sales of same size or whether they differ in selling ability as measured by the average size of their sales. During the last week, out of 14 sales, A made 5, B made 4 and C made 5 sales. The following are the weekly sales record (in Rs. thousand) of the three salesmen.

A	4	6	5	9	10
B	6	3	3	4	-
C	7	9	5	6	5

Perform ANOVA to test whether the three salesmen's average sales differ in size.

7. a) Explain different types of control charts with illustrations.
 b) Fit a regression line of Y on X and predict Y if $X = 10$.

X:	-1	5	3	2	1	7	7
Y:	-6	1	0	0	1	2	5

8. a) Explain the characteristic features of an M/M/1 queue.
 b) A person repairing transistors finds that the time taken to repair a set has an exponential distribution with mean 20 minutes. If the transistors are repaired in the order in which they arrive and their arrival is approximately Poisson with an average rate of 15 per 8-hour day. What is the repairman's expected idle time each day? How many transistor sets are ahead of the average set just brought in?

