STATISTICS AND ANALYTICS FOR DECISION-MAKING

MBA-106

1. Compulsory Question

   State and describe the following

   (a) Non-sampling errors.

   (b) Classical probability rule.

   (c) Wilcoxon test.

   (d) Statistical hypothesis.

   (e) Law of large number.

2.Three machines producing 40%,35% and 25% of the total output are known to produce with defective proportion of items as:0.04,0.06 and 0.03,respectively.On aparticular day,a unit of output is selected at random, and is found to be defective.what is the probability that it was produced by the second machine?

3.In a certain manufacturing process,2% of the tools produced turn out to be defective.find the probability that in a sample of 50 tools,at least 3 will be defective.

4.What is Random sampling?Describe Random sampling methods in detail.

5.Define statistical hypothesis.Describe its testing procedure.

6.A sample of size 10 drawn from a normal population having mean as 31, and variance as 2.25.Is it reasonable to assume that the mean of the population is 30?Assume $\alpha = 0.01$.

7. Fit a Poisson distribution to the following observations relating to the number of car accident in a city during a year and test the goodness of fit :

No. of Car Accident (x) :	0	1	2	3	4
Frequency :	210	90	40	15	10

8. What is Estimation? Describe interval estimation of population mean, proportion and variance.

9. Write a detailed note on the adequacy of Microsoft Excel as data analytic software.