**R CODES of ASSIGNMENT-6**

Ques) Generating a time series of size 500 from an AR(1) process with coefficient 0.8 and -0.75. Obtain mean, variance, ACVF, ACF. Is the process stationary?

**CODE:**

rm(list=ls(all=T)) #to clear the environment

par(mfrow=c(1,2)) #to divide the graph into 2 columns

ar1<-arima.sim(model=list(order=c(2,0,0),ar=c(0.8,-0.75)),n=500);ar1

mean(ar1)

var(ar1)

acf<-acf(ar1,lag.max=20,type=c("correlation"),plot=T);acf

acvf<-acf(ar1,lag.max=20,type=c("covariance"),plot=T);acvf

**OUTPUT:**

> ar1<-arima.sim(model=list(order=c(2,0,0),ar=c(0.8,-0.75)),n=500);ar1

Time Series:

Start = 1

End = 500

Frequency = 1









