Roll No.: 40023

Date:

**Aim:** To perform practical of Time-series forecasting.

**Program Code:**

data(AirPassengers)

class(AirPassengers)

start(AirPassengers)

end(AirPassengers)

frequency(AirPassengers)

summary(AirPassengers)

plot(AirPassengers)

abline(reg=lm(AirPassengers~time(AirPassengers)))

cycle(AirPassengers)

plot(aggregate(AirPassengers,FUN=mean))

boxplot(AirPassengers~cycle(AirPassengers))

acf(log(AirPassengers))

(fit<-arima(log(AirPassengers),c(0,1,1),seasonal=list(order=c(0,1,1),period=12)))

pred<-predict(fit,n.ahead=10\*12)

ts.plot(AirPassengers,2.718^pred$pred,log="y",lty=c(1,3))

**Conclusion:** Practical of Time-series forecasting has been executed successfully.