**Department of Mathematical Sciences Faculty of Applied Sciences**

**Wayamba University of Sri Lanka**

**B.Sc. (General/Joint Major/Special) Degree Program**

**Academic Year 2022/2023 – Semester I**

**STAT 3124 – Time Series Analysis**

**Quiz #01**

1. The Dataset 02 shows monthly U.S. clothing sales from January 1992 to December 2000.
2. Open the data into a MINITAB worksheet and draw the time series plot.
3. Identify the components in the time series plot.
4. Obtain the Autocorrelation function of the above data set and comment on that.
5. Is the series stationary? Give reasons.
6. If not, convert the series into a stationary series.
7. Obtain the Partial Autocorrelation function of the above data set and comment on that.
8. Identify the suitable tentative model.
9. Check the significance of the parameters, if it is necessary any modifications in the model. Note that and revise the model. If not give reasons.
10. Check the randomness of the residuals and comment on the results.
11. Check the parameter redundancy of the data.
12. Check the normality of the residuals and comment on that.
13. Identify the final model for the dataset.