**Name: 3rd statistics ( )**

 **2nd Course Examination 2nd attempt in Time Series 13.4.2023.**

**Q1) Is the following model stationary? If not, how can you change it to stationary?**

$$Y\_{t}=αt+u\_{t}+βu\_{t-1}$$

 **Where** $u\_{t}$ **is the White Noise uncorrelated with mean zero and variance** $σ\_{u}^{2}$ **and** $α and β$ **are constant parameters.**

**Q2) What are the properties (*mean, variance, covariance* and *autocorrelation*) of the MA(1) model? Hint: assume** $θ\_{0}=0$ **and** $u\_{t} $ **is white noise uncorrelated distributed with mean zero and variance** $σ^{2}$**.**

With best regards from Dr. Nabeel G. Nacy & M. Amira Wali