TIME SERIES ECONOMETRICS

SAMPLE QUESTIONS

*Note: Answers have been highlighted in yellow colour

Q 1. Consider the following sample autocorrelation estimates obtained using 250 data points:

Lag	1	2	3
Coefficient	0.2	-0.15	-0.1

What will the value of the Box-Pierce Q-statistic be?

1. 0.12
2. 37.50
3. 18.12
4. 19.01

Q2. Box- Pierce Q- statistics follows which of the following distributions? (1)

1. Normal distribution
2. t distribution
3. Gamma distribution
4. Chi squared distribution

Q 3. The coefficients of which of the following models sum up to one? (2)

1. EGARCH Model
2. IGARCH Model
3. GARCH Model
4. GARCH-M Model

Q 4. What is the most important disadvantage of the diagonal VECH approach to building multivariate GARCH models that is overcome by the BEKK formulation? (2)

1. The diagonal VECH model is hard to interpret intuitively
2. The diagonal VECH model contains too many parameters
3. The diagonal VECH model does not ensure a positive-definite variance-covariance matrix
4. The BEKK model reduces the dimensionality problem that arises when a number of series are modelled together

Q5. A random walk with drift model is (2)

1. A stationary model
2. Not a stationary model

3. Does not have a trend
4. Is always integrated of order 1

Q 6. Blanchard and Quah decomposed the demand and supply shocks as (3)

1. Only long-term shocks
2. Only short-term shocks
3. Temporary and permanent shocks
4. seasonal shocks

Q7.Two nonstationary variables Yt and Xt are cointegrated if (4)

1. The residuals of regression of Yt on Xt are non-stationary
2. The residuals of regression of Yt on Xt have a linear trend
3. The residuals of regression of Yt on Xt are stationary
4. The residuals of regression of Yt on Xt have a quadratic trend