

The Assam Royal Global University, Guwahati

Royal School of Humanities and Social Sciences

BA(H) Economics Sixth Semester

Semester End Examination, July 2022

Course Title : Applied Econometrics

Course Code : ECO182D601

Time: 3 Hours

Maximum Marks: 70

Note: Attempt all questions as per instructions given.

The figures in the right-hand margin indicate marks.

Section – A

1. Attempt **all** questions. (Maximum word limit 50) 2 x 8
- a. What is an autoregressive distributed lag model?
 - b. What is seasonality?
 - c. What do you mean by omitted variable bias?
 - d. What is meant by specification of an econometric model?
 - e. What is meant by instrumental variable?
 - f. What is exogeneity?
 - g. What is panel data?
 - h. What is time fixed effect?

Section – B

2. Attempt **any one** of the following: 12 x 1
- a. Write the characteristics of the time series data? How it is different from cross sectional data? Explain the significance of detrending in the time series econometric analysis.
 - b. Explain the Koyck's restriction in an infinite distributed lag model. Consider a finite distributed lag model of two-order. Suppose the independent variable increased by 1 unit in the current period permanently. Calculate the impact multiplier, effect after one year and after two years.
3. Attempt **any two** of the following: 7 x 2
- a. What is inclusion bias? Is the OLS estimate biased in case of inclusion bias?
 - b. Explain the importance of dummy variable in econometrics.
 - c. What is an Event study? Explain.
4. Attempt **any two** of the following: 7 x 2
- a. What is the simultaneity bias? Explain.
 - b. Explain the 3SLS estimator.
 - c. What is the endogeneity bias? How does the instrumental variable address it?
5. Attempt **any one** of the following: 14 x 1
- a. Explain the fixed effect model and random effect model? Distinguish between them.
 - b. Write the importance of panel data in econometric modelling.