# M.A./M.Sc. 3rd Semester Examination, 2022

## ECONOMICS

(*Econometrics*-III/*Agricultural Economics*-III)

PAPER – ECO-303(A & B)

*Full Marks* : 40

*Time* : 2 hours

*The figures in the right hand margin indicate marks*

*Candidates are required to give their answers in their own words as far as practicable*

## PAPER – ECO-303(A)

(*Econometrics*-III)

GROUP–A

Answer any two questions : 2 × 2

1. Distinguish between CLRM and GLRM.

2. Compare and contrast between CHTA and CCTA models.

3. Define the seemingly unrelated regression.

4. What do you mean by error components model ?

Answer any **two** of the following questions : $4 \times 2$

5. State and define the summary statistics of multinomial logit model.

6. Explain how GLRM is useful for predicting future observations.

7. State and explain the properties of CCTA model.

8. What do you mean by Dynamic Panel Data Regression Model ? Specify the appropriate method of estimation and problems associated with it. $2 + 2$

Answer any **one** of the following question : $8 \times 1$

9. Explain the estimation process of parameters of CHTA model by GLS method.

10. Prove that GLS estimator is BLUE.

## GROUP–B

Answer any **two** questions : $2 \times 2$

11. Write the general form of simultaneous equation system.

12. Write the order and rank conditions of identification.

13. What is the relation between logit and probit estimates ?

14. What is scree plot ?

Answer any **two** of the following questions : $4 \times 2$

15. Prove that the OLS estimates of simultaneous equation model are inconsistent.

16. Explain the method of ILS.

17. Discuss the problems of LPM.

18. *Explain the method of PCA.*

Answer any **one** question : $8 \times 1$

19. What is logit model ? Explain the estimation procedure of this model. Write any two measures of goodness of fit of this model. $2 + 4 + 2$

20. Explain the 2SLS method of estimation in simultaneous equation system.

## PAPER – ECO-303(B)

( *Agricultural Economics*-III)

### GROUP–A

Answer any **two** of the following questions : $2 \times 2$

1. What do you mean by perverse supply curve of agricultural commodity ?

2. Write an example of simultaneous equation model of demand and supply functions of agricultural goods.

3. What do you mean by hedging ?

4. Distinguish between quantity-income and value-income elasticities of demand.

Answer any **two** of the following questions : $4 \times 2$

5. Find the marginal productivities of inputs for the following types of production functions :
   Quadratic, CES, Cobb-Douglas, Spillman.

6. Explain T. N. Krishnan's model in regard to the relationship between price and marketable surplus of agricultural products.

7. Explain the different measures of marketing efficiency with a suitable example of marketing channel.

8. Write a brief note on agricultural marketing infrastructure.

Answer any **one** of the following question : $8 \times 1$

9. Explain different methods of measuring price instability of agricultural products.

10. Explain Nerlove's model of agricultural supply response.

## GROUP–B

Answer any **two** of the following questions : $2 \times 2$

11. What is farm management ?

12. What are the characteristics of a good farm plan ?

13. What is farm budgeting ?

14. What are the consequences of the presence of inefficiency in the production process ?

Answer any **two** questions : $4 \times 2$

15. What are the major economic principles that are

applied to farm management ? Discuss in brief any one economic principle that is applied in farm management.

16. Discuss in brief the steps involved in farm planning.

17. Briefly discuss the usefulness of the operation research technique in the farm management.

18. Discuss briefly different types of farm budgeting.

Answer any **one** question : $8 \times 1$

19. Define production frontier. Discuss Farrell's (1957), input based measure of technical efficiency. $2 + 6$

20. Assume that a single farm is producing two goods $X_1$ and $X_2$ by using two resources, Labour and Capital. Price of $X_1$ and $X_2$ are 4 and 5 per unit. Production of one unit of $X_1$ requires 1 unit of

labour and 4 units of capital and production of $X_2$ requires 2 units of labour and 3 units of capital. The amounts of the resources are available in fixed amount, 40 units and 120 units respectively. Formulate the farm's problem is the tarm of a LPP and solve the problem by using the simplex method. 2 + 6

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