M.A./M.Sc. 3rd Semester Examination, 2019

ECONOMICS

PAPER —ECO-305(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

Illustrate the answers wherever necessary

Write the answers to questions of each Paper in separate books wherever necessary

ECO–305 A

(Special Paper : *Econometrics*-IV)

GROUP – A

[*Marks* : 20]

1. Answer any *two* questions :   2 × 2

   (*a*) How will you measure output in the empirical estimation of production function ?

    (*b*) How would you measure cost by econometric method ?

    (*c*) What is translog cost function ?

    (*d*) What is Anderson investment function ?

2. Answer any *two* questions :   4 × 2

    (*a*) Explain the problems that arise in the estimation of Cobb-Douglas production function. Suggest the methods for solving these problems.

    (*b*) Explain the identification problem in the empirical estimation of the demand function.

    (*c*) How would you conduct a Family Budget Survey ? Mention the basic variables that are normally considered in this survey and also discuss the measurement problems for the same.

    (*d*) How will you empirically estimate the Employment function ? Explain in this respect the significance of the parameters used in the function.

3. Answer any *one* question : 8×1

(*a*) Explain the estimation of long run money demand function in terms of partial stock adjustment hypothesis.

(*b*) Explain in details the basic problems that are faced by econometricians in the estimation of cost function. How would you solve them ?

GROUP – B

[*Marks* : 20]

4. Answer any *two* questions : 2×2

(*a*) Compare the natures of ACF and PACF of AR, MA and ARMA processes.

(*b*) How is the growth rate of a variable (Y_t) measured from the regression of $\ln (Y_t)$ on t ?

(*c*) Distinguish between an intercept dummy and a slope dummy.

(*d*) Distinguish between short run and long run demand function for money.

5. Answer any *two* questions : 4 × 2

    (*a*) Describe the methodology of Box-Jenkins forecasting mentioning the necessary equations.

    (*b*) Derive the ACF of an AR(2) process for lag upto 'q' and show that it is declining with the value of q.

    (*c*) Can you use two dummy variables to evaluate growth rates of a variable in two subperiods ? If not, why can you not and if yes, how can you use ?

    (*d*) Write a note on Coppock's measure of fluctuation.

6. Answer any *one* question : 8 × 1

    (*a*) When a single break is identified for GDP (at constant 2009-10 prices) growth path of India in the period from 1970-71 to 2018-19, the optimum break is found in between 1992-93 and 1993-94. Two estimates with two dummy structures are found as follows :

(i)

	Intercept	D2	T	D2*T
Coefficients	8.5614	− 0·6068	0·0427	0·0259
t Stat	599·7364	− 17·1960	41·0101	19·1067
P-value	1·82E-89	2·09E-21	2·74E-37	3·20E-23

R Square	Adjusted R Square	Standard Error	F	Significance F
0·9985	0·9984	0·0331	9750·7216	2·69E-63

and (ii)

	Intercept	D2	D1*T	D2*T
Coefficients	8.5614	− 0·6068	0·0427	0·0686
t Stat	599·7364	− 17·1960	41·0101	79·1773
P-value	1·82E-89	2·09E-21	2·74E-37	5·82E-50

R Square	Adjusted R Square	Standard Error	F	Significance F
0·9985	0·9984	0·0331	9750·7216	2·69E-63

Briefly interpret the results.

(b) Explain how money demand and money supply functions can be estimated using simultaneous equation model.

ECO–305 B

(Special Paper : *Agricultural Economics*-IV)

GROUP – A

[*Marks* : 20]

1. Answer any *two* questions : 2×2

    (*a*) What are the major components of land reforms in Indian agricultural system ?

    (*b*) What do you mean by informalisation of employment ?

    (*c*) Does urbanisation cause for the expansion of RNFE ? Explain.

    (*d*) What is land tenancy ?

2. Answer any *two* questions : 4×2

    (*a*) Do you think that land reforms programme has helped in improving the socio-economic status of the rural landless people ? Discuss with arguments.

(b) What do you mean by distress diversification of RNFE ? Explain any two factors that are caused for distress diversification of RNFE.

(c) Explain the role infrastructure for the expansion of RNFE.

(d) Distinguish between farm sector and non-farm sector.

3. Answer any *one* question :　　　　　　8 × 1

(a) Explain the agriculture led growth model for the expansion of RNFE in India.

(b) Estimate the employment condition index for formal and informal sectors in India. Explain whether the condition of employment has improved in India during recent years or not.

GROUP — B

[*Marks* : 20]

4. Answer any *two* questions :　　　　　　2 × 2

(a) What is the debate of trend of agricultural TOT in India ?

(*b*) What is Compound Annual Growth Rate (CAGR) ? How is it estimated ?

(*c*) What is a spike in a macro time series ? Why does it occur ?

(*d*) What is meant by inter-sectoral terms of trade ?

5. Answer any *two* questions :   4 × 2

(*a*) Explain the short run and long run trends of TOT between agriculture and Industry in India.

(*b*) Estimate the gain (or loss) in multisectoral TOT.

(*c*) What are the major types of fluctuation observed in annual data on agricultural production ?

(*d*) Breaks in a macro variable in between two subperiods may be of different types. Briefly explain any two of them.

6. Answer any *one* question : 8×1

   (*a*) Briefly explain the salient features of multi-sectoral TOT in India during recent years.

   (*b*) Regression of ln(GDPA) for India for the period 1950-51 to 2012-13 measured at constant (2009-10) prices on t ($t = 1, 2, ..., 63$), t^2 and t^3 gives the following results :

$$\ln(\text{GDPA}) = 7 \cdot 0171 + 0 \cdot 01628t + 0 \cdot 00023t^2 - 1 \cdot 1\text{E-06}t^3$$

$R^2 = 0 \cdot 9909$, Adjusted $R^2 = 0 \cdot 9905$, F-value = $2150 \cdot 42$ and P-value = $3 \cdot 39\text{E-60}$. From these results write a brief note on the pattern of growth of India's GDPA in the referred period.

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