

M.A./M.Sc. 3rd Semester Examination, 2018

ECONOMICS

PAPER — ECO-301(A + E)

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

PAPER — ECO-301A

GROUP— A

1. Answer any *two* questions : 2 × 2

(a) What do you mean by integrated farming system ?

(Turn Over)

(2)

(b) How does the process of commercialisation affect the rural agricultural demographic profile ?

(c) What is 'interlinked transaction' ?

(d) Rural credit market is monopolistic in nature. Explain.

2. Answer any *one* question : 6 × 1

(a) How does the process of commercialisation affect the integrated farming system under the structure of traditional agriculture ?

(b) Explain why the notion of stationary equilibrium' becomes unviable for small peasants.

3. Answer any *one* question : 10 × 1

(a) (i) In a partial equilibrium framework derive the optional contract of wage and rate of interest and level of employment in an interlinked transaction, where credit market is linked with the labour market.

(3)

(ii) Write down the important implications of such a model. 7 + 3

(b) (i) What is meant by "temporal in accessibility to the market in the context of backward agriculture ?

(ii) Why does the curve of proportion of output marketed against size-class holding look like 'V'-shaped ? 4 + 6

GROUP—B

4. Answer any *two* questions : 2 × 2

(a) What are needs of insurance in agriculture ?

(b) What is 'blue box subsidy' ?

(c) Define contract farming.

(d) What do you understand by 'safety-net's for poor farmers.

5. Answer any *one* question :

6 × 1

- (a) If a country globalises its agricultural sector, it cannot achieve the objective of self-sufficiency in agricultural production. Do you agree with this statement? Give your arguments.
- (b) What are the major differences between weather based crop insurance and yield based crop insurance?

6. Answer any *one* question :

10 × 1

- (a) (i) Write a short note on impact of FDI in retail trade of agriculture.
- (ii) What is 'amber box subsidy'?
- (iii) Explain the different types of contract farming. 4 + 2 + 4
- (b) (i) Explain the agricultural policy by "Norton" (2002).
- (ii) Critically evaluate the "National Agricultural Insurance Scheme" (NAIS) of India. 5 + 5

(5)

PAPER – ECO-301E

GROUP – A

1. Answer any *two* questions : 2 × 2

(a) Briefly explain the model selection criteria.

(b) State and briefly explain the consequences of heteroscedasticity in an econometric model.

(c) What do you mean by ortho-partial correlation of an explanatory variable with the explained variable ? How is it different from the traditional partial correlation ?

(d) Distinguish between nested and non-nested models.

2. Answer any *one* question : 6 × 1

(a) What happens when the normality assumption of disturbances is violated ? In this respect explain the Jarque and Bera test for normality assumption.

(6)

(b) Suppose that in a linear multiple regression of Y on X_1 and X_2 the estimated coefficient of X_1 is negative and that of X_2 is positive, though in the simple regressions of Y on X_1 and X_2 the estimated coefficient of both X_1 and X_2 are positive. Under what conditions and how can you have such results ?

3. Answer any *one* question : 10 × 1

(a) Explain the Breusch-Godfrey LM test of autocorrelation. Write a note on whites test of heteroscedasticity.

(b) Regression of fluctuation of growth of service sector output of India around the trend growth path (Y) in the period from 1950-51 to 2013-14 on the explanatory variables-land (arable) Man ratio (X_1) and Openness Index (X_2) gives the following results :

(7)

Dep. Var. Y	Coefficient	t Stat	P-value
Intercept	-0.88	-21.43	3.63E-27
X1	0.24	19.82	1.30E-25
X2	1.27	22.24	6.62E-28

R square	0.9092	Adj Square	0.9056	F	225.23	Sig-F	2.73E-27
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However, simple regression of Y on X1 and that of Y on X2 give the following results :

Dep. Var. Y	Coefficient	t Stat	P-value
Intercept	-0.07	-1.18	0.25
X1	0.03	1.23	0.22

R square	0.0284	Adj Square	0.0097	F	1.52	Sig-F	0.22
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Dep. Var. Y	Coefficient	t Stat	P-value
Intercept	-0.09	-3.08	3.32E-03
X2	0.39	3.72	4.97E-04

R square	0.2098	Adj Square	0.1946	F	13.80	Sig-F	4.97E-04
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Finally, simple regression of X_1 on X_2 gives the following results :

Dep. Var. X_1	Coefficient	t Stat	P -value
Intercept	3.36	27.98	5.14E-33
X_2	- 3.74	- 8.94	4.25E-12

R square	0.6060	Adj Square	0.5984	F	79.98	Sig-F	4.25E-12
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Interpret the main results, specially that

$$R_{YX_1X_2}^2 (=0.9092) > R_{YX_1}^2 (=0.0284) + R_{YX_2}^2 (=0.2098).$$

GROUP-B

4. Answer any two questions : 2 × 2

- (a) What is the usefulness of maximum likelihood estimation method ?
- (b) What is structural break ?
- (c) When do you apply chow test ? What is the form of the test statistic ?
- (d) What is meant by Dummy variable trap ?

5. Answer any *one* question : 6 × 1

(a) How do you detect the presence of one-time exogenous structural break.

(b) What is meant by panel data? Using a suitable example explain the notion of least square dummy variable model.

6. Answer any *one* question : 10 × 1

(a) Derive the restricted maximum likelihood estimator for the slope parameter of a k variable classical linear regression model check whether the estimator is unbiased or not.

(b) When do you use Generalised Regression Model? Discuss the procedure of obtaining the estimator of the parameters in such a model.
