

RAMAKRISHNA MISSION VIDYAMANDIRA

(Residential Autonomous College affiliated to University of Calcutta)

B.A./B.Sc. FIFTH SEMESTER EXAMINATION, DECEMBER 2017

THIRD YEAR [BATCH 2015-18]

ECONOMICS (Honours)

Paper : VI

Date : 23/12/2017

Time : 11 am – 3 pm

Full Marks : 80

(Use a separate Answer book for each group)

Group – A

Answer any three questions

[3×10]

1. Show that, in the context of general linear model, the OLS estimators of the regression parameters are BLUE. (10)
2. State & prove FWL theorem. (10)
3.
 - a) Explain how linear probability model can be used to model a limited dependent variable. (3)
 - b) State the limitations of linear probability model. (3)
 - c) Explain how LOGIT model can be used to overcome such limitations of the linear probability model. (4)
4.
 - a) Explain dummy variable trap. (3)
 - b) A simple linear regression of wages on gender, run on a sample of 200 individuals, 150 of whom are men, yields the following:
$$W_i = 300 - 50 D_i + \hat{u}_i$$
(20) (10)

Where W_i is the wage in Rs./day of the i^{th} individual. $D_i = '1'$ if individual i is male, and '0' otherwise. $\hat{u}_i$ is the residual.

 - (i) What is the average wage in the sample?
 - (ii) What is the value of ESS (Explained Sum of Squares)? (3+4)
5.
 - a) Explain the concept of multicollinearity. (2)
 - b) State the effect of presence of multicollinearity on estimated values of the regression parameters. (2)
 - c) State and explain the reasons behind the presence of multicollinearity in the regression model. (3)
 - d) Explain how the concept of VIF can be used to identify the presence of multicollinearity in a regression model. (3)

Group – B

Answer any two questions from Question Nos. 6 to 8 :

[2×4]

6. a) What is foreign exchange swap? (1)
b) What is hedging? (1)
c) Suppose domestic price inflation is 8%, foreign price inflation is 2% and exchange rate (no. of home currency per unit of foreign currency) appreciates by 5% point. By how much percentage point the real exchange will appreciate or depreciate? (1)
d) Suppose two parties made a contract on 1.4.2017 to transact ten lakhs of Indian rupees for fifty thousand US dollars on 1.4.2018. What is the dollar – rupee exchange rate and what type of exchange rate it is? (1)
7. a) What is J – Curve phenomenon? (1)
b) What are the reasons behind J – Curve phenomenon? (1½)
c) Show that sum of the import and export elasticity must be greater than unity for a devaluation policy to improve the trade balance. (1½)
8. Explain how you will treat the following transactions in the BOP account of India :
a) An Indian tourist pays a hotel bill in London using a traveller's cheque. (2)
b) You buy an American share and pay by using a cheque of an Indian bank. (2)

Answer any one question from Question Nos. 9 & 10 :

[1×7]

9. a) What do you mean by Impossible Trinity? (1)
b) Show that, monetary policy is ineffective with fixed exchange but is effective with flexible exchange rate system when there is perfect capital mobility. (4)
c) Is fiscal policy ineffective with perfect capital mobility and fixed exchange rate? Justify. (2)
10. Using a 'Swan diagram' show how an economy can attain both internal and external balance using a combination of government expenditure and exchange rate policy. (7)

Answer any one question from Question Nos. 11 & 12 :_

[1×10]

11. a) Suppose an economy is characterized by the following equations:

$$Y = C + I + G + NX$$

Where C = consumption, I = Investment, G = Govt. Expenditure and NX = Net Export

Again,

$$C = \bar{C} + (1-s)Y_d$$

$$Y_d = Y - tY$$

$$I = \bar{I}$$

$$G = \bar{G}$$

$$X = \bar{X}$$

$$M = \bar{M} + mY_d$$

- (i) Solve for the equilibrium level of income as a function of exogenous variables. (1)
(ii) What is the open economy fiscal multiplier, $\frac{\Delta Y}{\Delta G}$? Is it larger or smaller than closed economy fiscal multiplier? Give intuitive explanation. (2½)

(iii) If the disposable income is redefined as $Y_d = Y - \bar{T}$, will there be any change in the fiscal multiplier? If so, why? (1½)

(iv) What will be the effect on trade balance (TB) after an expansionary fiscal policy in each case when, $T = tY$ and $T = \bar{T}$? (2)

b) Now suppose investment demand is sensitive to the rate of interest, such that,

$$I = \bar{I} - br$$

And the money market equilibrium is given by,

$$\frac{M}{P} = lY - kr$$

(i) How do you think equilibrium income of the economy will change from question (a)(i)? (1½)

(ii) What will be the effect of an exogenous increase in M on equilibrium Y , r and TB without any capital mobility? Draw graph. (1½)

12. a) What do you mean by *Interest Rate Parity Condition* for the determination of exchange rate in FOREX market? (1½)

b) Suppose you have two choices:

	r	r^*	$\theta = \frac{E^e - E}{E}$	$r - r^* - \frac{(E^e - E)}{E}$
Case – 1	0.10	0.06	0.08	– 0.04
Case – 2	0.10	0.12	– 0.04	0.02

where r is rate of return on domestic currency, r^* is the rate of return on foreign currency, E is the exchange rate and it is defined as the number of home currency per unit of foreign currency. E^e is the expectation of exchange rate.

(i) Explain Case – 1 and Case – 2. (1½)

(ii) Which currency will an investor choose to hold? And why? (1½)

(iii) What will be the effect on E in each case? (1½)

c) What do you mean by exchange rate overshooting (Assume that initially an expansionary monetary policy was initiated given all other things, i.e. P , Y and E^e)? How do you think will the domestic money market and the foreign exchange market react with adjustment in price level in the long run? Explain with appropriate diagram. (4)

Answer any two questions from Question Nos. 13 to 15 : [2×4]

13. Suppose you are planting some trees in your garden. Why will the price of such trees be less than that of social optimum? What steps could the government take to ensure social optimum pricing of the trees? (2+2)

14. Do you think that an expenditure tax is better than the income tax? – Give reasons. (4)

15. Discuss the concepts of non-excludability and non-rivalry in consumption in the context of provisioning of defence services in an economy. (4)

Answer any one question from Question Nos. 16 & 17 :

[1×7]

16. Suppose you are producing one private good and one public good. How will your equilibrium condition differ from the case of two private goods? Explain. (7)
17. Suppose the utility function of a representative individual is $U = \log x$ where x is the amount of consumption of the public good produced in the economy. What would be the optimal tax structure in this situation under equal proportional sacrifice? (7)

Answer any one question from Question Nos. 18 & 19 :

[1×10]

18. a) Discuss the concept of Revenue Deficit and Fiscal deficit. Consider two economies (A&B) with same Fiscal deficit to GDP ratio but with Revenue deficit to GDP ratio higher in A. Which country is in a better position and why? (3+2)
- b) How are the revenue sources of the government shared between the states and the centre in India? Explain the role of Central Finance Commission in this context. (3+2)
19. a) What is excess burden of Public Debt? (3)
- b) How does Ricardo prove his equivalence between tax finance and debt finance – Explain. (7)

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