M.Phil./Ph.D. PROGRAMME IN ECONOMICS

Term-End Examination

December 2014

00481

RECE-003 : AGRICULTURAL ECONOMICS

Time : 3 hours   *Maximum Marks : 100*

Note : *Answer any **two** questions from Section A and any **five** questions from Section B. Questions in Section A carry 20 marks each (to be answered in about 600 words each) and those in Section B carry 12 marks each (to be answered in about 350 words each). In the case of numerical questions word limits do not apply.*

SECTION A

1. In what way is the Schultz-Jorgenson claim on withdrawal of workers from agriculture different from what was proposed by Lewis ? Elaborate.

2. State the general form of Cobb-Douglas, Transcendental, Translog , CES and the Leontief production functions. Discuss their special cases (when a particular form of the function becomes equivalent to the other), pointing out their limitations.

3. Discuss the trends in the non-agricultural rural employment in India over the period 1983 to 2005. What factors have contributed to its growth ?

4. Distinguish between the horizontal and vertical market integration. How can spatial market integration be analysed ?

SECTION B

5. Discuss the challenges in the direction of expanding the institutional agricultural credit in India.

6. Explain the time-series approach to forecasting agricultural prices. How can Box-Jenkin's ARIMA improve the efficiency of your forecasts ?

7. Present the formalized derivation for estimating the price elasticity of 'marketed surplus' proposed by Behrman. Do you agree that this is an improvement over the model suggested by Raj Krishna ? Why ?

8. Given that :

      (i)   output-labour ratio is 0·5;

      (ii)   incremental output-labour ratio is 0·1;

      (iii) land-labour ratio is 0·1;

      (iv) incremental land-labour ratio is 0·01; and

      (v)   share of land in income is 0·75.

  (a)   Calculate Solow's measure of technical change.

  (b)   If returns to scale is 1·1, labour usage is 100 units and incremental labour usage is 10 units, will the above measure of technical change be affected ?

9. Discuss the basic tenets of the Agricultural Policy, 2000.

10. Discuss the rationale behind the Leontief Input-Output analysis.

11. What is meant by 'network analysis' in agricultural marketing ? What important questions can be answered by the CPM/PERT techniques ? Which of these two is a deterministic technique ? Why ?

12. Explain the argument behind the 'farm-size productivity debate'.

13. Production function for wheat is reported to be : $W = A \, X_1^{\alpha} \, X_2^{\beta}$, where X_1 = land and X_2 = labour.

  (a) Is the function given above homogenous ? If yes, what is the degree of homogeneity ?

  (b) Work out the expansion path of the above function.

  (c) If over one time period, labour usage grows 'r' percent, what will be the growth in output ?