



The Open University of Sri Lanka  
 Faculty of Engineering Technology  
 Diploma/Degree in Technology & Industrial Studies (Agriculture)  
 Final Examination- 2012/2013  
 AEM 4234 Agricultural Economics & Management

Date : 18 - 08 -2013  
 Time : 13.30 - 16.30 hours  
 Duration : Three (03) hours

**SECTION II - Answer only four (04) questions**

1. (i) Draw the circular flow of income and discuss how the various sectors of the economy operate (12.5 marks)
- (ii) Write the formula for calculating the GDP and briefly explain its components (12.5 marks)
2. The following table provides the production possibilities frontier of a farmer in Nuwara Eliya District, showing the combinations of milk and potato.

Potato (kg)	Milk (liters)
0	420
100	400
200	360
300	300
400	200
500	0

- (i) Draw the farmers' production possibility frontier (5 marks)
- (ii) When the farmer is operating at 300 kg of potato and 300 liters of milk
  - a. What is the opportunity cost of producing additional 100 kg of potato? (5 marks)
  - b. What is the opportunity cost of producing additional 60 liters of milk? (5 marks)
- (iii) Suppose the farmer is currently producing 200 kg of potato and 200 liters of milk.
  - a. Is the farmer efficiently producing potato and milk? (2 marks)
  - b. How many additional kg of potato could the farmer produce without giving up any milk? (4 marks)
  - c. How many additional liters of milk could the farmer produce without giving up any potato? (4 marks)

3. Briefly explain the importance of the following in relation to sustainable agriculture.
  - (i) Fertilizer subsidy and food security (12.5 marks)
  - (ii) Import taxes and agricultural production (12.5 marks)
  
4.
  - (i) Discuss the importance of record keeping in a farm enterprise (12.5 marks)
  - (ii) The effectiveness of an organization depends on the behavior and performance of human resources. Discuss. (12.5 marks)
  
5. Suppose a farmer wanted to cultivate one hectare of Banana and he spent Rs. 30,000 to establish the banana plantation (labor + machinery + planting material). He will have to spend Rs 10,000 annually as operation and maintenance (O&M) costs from the second year and gross benefits from selling banana have been calculated as Rs. 4500.00, 11210.00, 23310.00, 39282.00 and 42210.20 respectively. Suppose the project ends in six years.
  - (i) Develop the cost stream, benefit stream and net cash flow stream (10 marks)
  - (ii) Calculate B/C ratio, NPV (assume a 10% discount rate) and the IRR (10 marks)
  - (iii) Comment on your results (5 marks)
  
6. Write short notes on four (4) of the following topics (25 marks)
  - (i) Renewable and No-renewable resources
  - (ii) Consumer surplus and producer surplus
  - (iii) Maximum sustainable yield (MSY)
  - (iv) Grand utility frontier and the Bliss Point
  - (v) Market failure