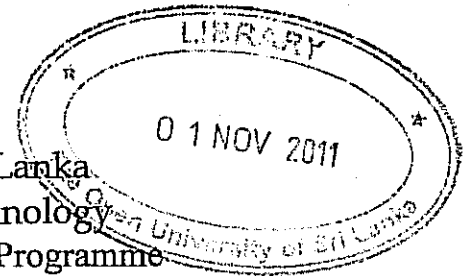




The Open University of Sri Lanka
 Faculty of Engineering Technology
 Bachelor of Industrial Studies Programme



Final Examination- 2010/2011

AEI 5243 Farm Power and Machinery

Date : 20.03.2011
Time : 0930-1230
Duration : Three (03) hours

SECTION 2: Answer any four questions.

1. a) Briefly explain the common features of an agricultural tractor.
 b) Briefly discuss the following two (02) terms relate in tractor engine.
 - i)Thermoshipon mechanism
 - ii) Carburator

2. Sri Lanka is a potential country to produce electricity from renewable energy sources. Write an essay on that.

3. Write short notes on any three of following topics.
 - a. Marginal benefits of animal power versus human labour
 - b. Solar pond technology
 - c. Primary and secondary tillage
 - d. Importance of farm machinery cost evaluations
 - e. Power transmission methods of tractor engine

4. Write an essay on potential of farm mechanization in large scale paddy cultivation in dry zone of Sri Lanka (Your answer should include the farmers' response to mechanization and effect of mechanization on improving the productivity).

- 5.a) Briefly discuss the important parameters to be considered in designing a machine for seeding and transplanting.
 - b) Schematically represent a label diagram of knapsack sprayer use in agricultural activities.
 - c) Write a summary account on nozzle spraying patterns of a sprayer.

- 6.a) Write a brief summary on importance of a lubrication system for tractor engine.
 - b) Write an essay on how you could improve the efficiency and performances of a farm tractor.