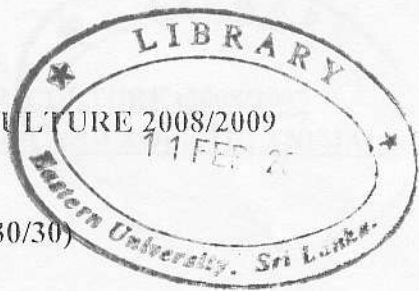


EASTERN UNIVERSITY, SRILANKA

FIRST YEAR SECOND SEMESTER EXAMINATION IN AGRICULTURE 2008/2009

(October/November 2010)

AEN 1201 FARM POWER AND MACHINERY (3:30/30)



Answer all questions

Time: 02 hrs

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01. a) Briefly describe the importance of lubrication system in four stroke engine.
- b) Briefly describe the structure and function of radiator in a cooling system of a four wheel tractor?
02. Discuss the components and operation of combine harvester used for the harvesting of paddy.
03. Write short notes on the following
- (i) Gear box in a tractor
  - (ii) Spike tooth harrow
  - (iii) Disc plough
04. (a) List out the simplifying assumptions used in analyzing the stability of a four wheel tractor moving on a plane, level surface.
- (b) A tractor is moving on a graded area with a grade angle of  $45^{\circ}$ , weight of the tractor is 3000 kg acting 2 m from the front wheel. Distance between front and rear wheels is 2.5 m. Determine the weight transfer in front and rear wheels when 1000 kg pulling force is given to the tractor on the point of 0.25 m from the rear wheel surface contacting point. (Hitch angle is  $30^{\circ}$ ).
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