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EASTERN UNIVERSITY, SRI LANKA
FIRST YEAR SECOND SEMESTER EXAMINATION IN AGRICULTURE –
2004/2005
AEN 1201 – FARM POWER AND MACHINERY (3:30/30)

Answer all questions

Time: Two hours

1. a. List the objectives of primary tillage and give at least (5) five primary tillage implements with their specific use.
b. State the principle behind operation of a Carburettor.
c. Engine size is 100 x 124 mm. Compute the following:
 - i) Piston Displacement (PD)
 - ii) Total Cylinder Volume
 - iii) Compression ratio. (given that Clearance Volume = PD/6)

2. a. Briefly discuss the mechanisms found in the Combine Harvester.
b. Explain briefly the possible causes of poor performance of a Combine Harvester.

3. a. Define the following terms:
 - i) Draw Bar Power (DBP)
 - ii) Traction
 - iii) Co-efficient of traction
b. Enumerate the simplifying assumptions used in analyzing stability of a four wheel tractor moving on a plane and level surface.
c. Write a brief account on 'Tractive Efficiency'.

4. Write short notes on the following:
 - a. Jet pump
 - b. Differential
 - c. Priming of centrifugal pump.