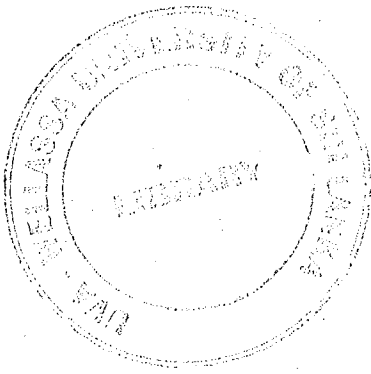




Uva Wellassa University
BSc in Palm & Latex Technology & Value Addition
End Semester Examination – February/March 2011
Year II Semester I



Engineering Principles of Palm & Latex Industry (PLT 231-2)

**Uva Wellassa
University**

Instructions

Answer **all** questions

No. of questions : Twenty (20)

No. of pages : Four (04)

Time : 30 minutes

Total marks allocated : 30%

Index No:

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PART III - Essay

Question 01

I. Write short notes on,

- a) Specific Heat Capacity (06 marks)
- b) Laminar flow & Turbulent flow (06 marks)
- c) Critical Reynold's Number (06 marks)

II. A dryer is used to dry 1000 kg of rubber having 26°C from 55% moisture to 10% moisture. 550 kg of steam is used to increase the temperature of rubber to 64°C .

Specific heat capacity of water is $4.186 \text{ kJ kg}^{-1} \text{ }^{\circ}\text{C}^{-1}$

Specific heat of rubber is $2.65 \text{ kJ kg}^{-1} \text{ }^{\circ}\text{C}^{-1}$

Latent heat of steam is 2283 kJ kg^{-1}

Latent heat of vaporization is 2331 kJ kg^{-1}

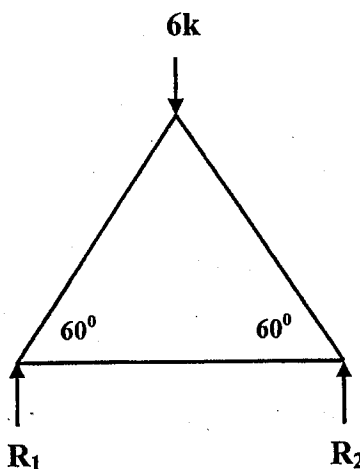
- a) Estimate the heat requirement of the dryer. (06 marks)
- b) Calculate the efficiency of the dryer. (06 marks)

Question 02

I. Write short notes on,

- a) Equations of Motion (06 marks)
- b) Distance-Time Graphs for uniform & non-uniform motions. (06 marks)

II. Given below is a simple truss which is in equilibrium.



Calculate,

- a) The R_1 & R_2 reactions. (06 marks)
- b) The internal member forces. (12 marks)