



Uva Wellassa University
Faculty of Animal Science & Export Agriculture
BSc in Palm & Latex Technology and Value Addition



End Semester Examination –August/ September 2014
Year II Semester I

Engineering Principles in Palm and Latex Industry PLT 231-2

Instructions

Answer all questions

- No. of questions : Three (03)
No. of pages : Two (02)
Time : One (01) Hour
Total marks allocated : 60%

Index No:

PART III – ESSAY

Question 01

- (I) Define the term “Truss” (05 marks)
- (II) Show the components of a roof truss with the help of sketch diagram (05 marks)
- (III) Describe the different types of trusses used in building constructions with labeled diagrams (10 marks)

Question 02

I. An air sample at 30°C Dry Bulb Temperature and 40% relative Humidity is heated up to 45°C. Find the following properties of heated air sample.

- (a) Relative Humidity (04 marks)
- (b) Dew Point Temperature (04 marks)
- (c) Humidity Ratio (04 marks)
- (d) Determine the amount of sensible heat (kJ/kg Dry Air) needed to increase the temperature of above air sample (08 marks)

Question 03

A missile is launched into the air at an initial velocity of 80 m/s. It is moving with a constant velocity until it reaches 1000 m. When the engine fails;

- (a) How long does it take it to reach 1000m?
- (b) How high does the missile go up?
- (c) How long does it take to fall back to the earth?
- (d) How long does it stay in the air?
- (e) How fast is it moving after hitting on the ground?

(20 marks)