UVA WELLASSA UNIVERSITY OF SRI LANKA
FACULTY OF ANIMAL SCIENCE & EXPORT AGRICULTURE

Uva Wellassa University

BSc in Export Agriculture
BSc in Palm & Latex Technology and Value Addition
BSc in Tea Technology and Value Addition
Third Year First Semester Examination – June/ July 2017

Experimental Designs (EAG 301-1)
Section II- Essay Questions

Instructions:
Answer all questions in the given booklet.
No. of questions : One (01)
No. of pages : Two (02)
Time : Thirty (30) minutes
Total marks allocated : 50%
Candidates are allowed to use calculators

01.

(I) What are the main principles in Experimental designs

(05 marks)

(II) A researcher conducted an experiment to study the effect of Clone (C), Soil type (S), and ethrel concentration (E) on rubber latex yield. He conducted this experiment under four (04) different blocks using three (03) commonly used rubber clones, three (03) soil types and two (02) ethrel concentrations. After certain period of time he recorded yield data and analyzed using Minitab 16 package. The part of Minitab output is given below. Interpret the given output using necessary hypothesis.

Output 01

Source	P-value
E	0.015
S	0.020
C	0.012
Block	0.023
E*S	0.212
E*C	0.321
S*C	0.021
E*S*C	0.341
Error	
Total	

(25 marks)

(54)

(III) A researcher plans to conduct an experiment to study the effect of six (06) factors A, B, C, D, E and F on tomato yield using 2^6 (each factor has two levels) factorial experiment in Complete Randomized Design (CRD) using three (03) replicates. According to the availability of facilities he realized that it is difficult to do the experiment using all treatment combinations. As he is not willing to study the sixth order interaction, he decided to do the experiment only using 32 treatments. List down all 32 treatments which can be applied for the experiment according to standard notations.

(20 marks)

[End of Section II]