



FIJI NATIONAL UNIVERSITY
College of Agriculture, Fisheries & Forestry
School of Agricultural Sciences and Forestry
Department of Soil Science & Agril. Engineering

FINAL EXAMINATION: 2018

B.Sc Agriculture IIIrd year: Trimester IInd

SOIL SURVEY AND LAND USE INTERPRETATION (SAC 702)

TOTAL MARKS: 100

TIME ALLOWED: 3:10 HOURS

INSTRUCTIONS:

This paper consists of three (3) pages. Please check to see that your paper is complete.

Answer all questions in the answer booklet.

- Number your answers correctly in the provided answer booklet.
- Write your student ID number on all pages that you use including any additional sheet paper.
- Printed or written study materials are not allowed into the examination hall.
- Mark values appear at the end of each question or part thereof.

"MOBILE PHONES ARE STRICTLY NOT ALLOWED"

WRITE THE SHORT ANSWER FOR GIVEN QUESTIONS

Attempt all questions

1. Provide the subordinate characteristics of master horizons? Write any four examples of subordinate characteristics in master horizons. Analyse and discuss the subordinate characteristics of given within master horizons.

- (i) a (ii) km (iii) t (iv) p
(v) n (vi) o (vii) e (viii) ss

(4+4+8 = 16 marks)

2. Analyse and discuss the characteristics of soil taxonomy? How it varies with characteristics of earlier soil classification system. Describe the major features of given diagnostic surface horizons (epipedons).

- (i) Anthropic (ii) Mollic (iii) Ochric (iv) Histic

(4+4+8 = 16 marks)

3. What are the transitional horizons? Give the examples of any two transitional horizons with their important characteristics. Draw a neat sketch of a hypothetical soil profile by depicting all the transitional horizons with master horizons.

(4+4+8 = 16 marks)

4. Define soil survey and demonstrate the features of any two mapping units used in soil survey. Describe the reconnaissance and detailed type of soil survey.

(4+4+8 = 16 marks)

5. What do you understand with Land Capability Classification? Analyse and discuss in detail the structure of land capability classes and sub classes used in Fiji.

(4+8+4 = 16 marks)

6. Demonstrate the formative elements and important characteristics of given soil orders.

i) Mollisols ii) Aridisols iii) Ultisols iv) Entisols.

(5x4 = 20 marks)

END OF EXAMINATION PAPER