

UNIVERSITY OF FORT HARE

Soil genesis, Morphology, and Classification
AGS 324

JANUARY SUPPLEMENTARY EXAMINATIONS

2019

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TIME : 3 HOURS

SUBJECT : AGS 324

MARKS : 100

This paper consists of 3 pages including the cover page

Internal Examiners

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INSTRUCTIONS

1. Answer ALL questions.
2. It is in your best interest to write clearly and legibly

QUESTION 1 [20]

Soil classification is carried out for various purposes. Outline **FIVE (5)** of these objectives.
[10]

Describe the diagnostic surface horizons recognised in the South African Soil Classification System and in each case indicate the major criteria used to distinguish the horizon.
[10]

QUESTION 2 [20]

Give the major properties and/or characteristics associated with the following diagnostic horizons:

argic horizon.

albic horizon.

duric horizon.

ferralic horizon.

melanic epipedon. [10]

Indicate at least one of the laboratory criteria used to identify the following horizons:

ferric horizon.

fulvic horizon.

calcic horizon.

natric horizon.

argic horizon.[10]

QUESTION 3 [20]

Describe the diagnostic surface horizons (epipedons) recognized in United States Soil Taxonomy system and in each case indicate the major criteria used to distinguish the horizons.

QUESTION 4 [20]

- (a) Describe the main steps followed in classification of soils using the WRB system. [10]
- (b) Indicate the problems associated with cultivation of vertisols and the management. [10]

QUESTION 5 [20]

Discuss the various types and methods of soil survey in relation to scale, choice of mapping units and availability of remotely sensed data.