



FACULTY OF SCIENCE

DEPARTMENT OF BOTANY AND PLANT BIOTECHNOLOGY

MODULE BOT0087 SCIENTIFIC METHODS

CAMPUS APK

EXAM JUNE 2018

DATE: 08 JUNE 2018

SESSION: 09:00 – 12:00

ASSESSOR:

DR AA OSKOLSKII

INTERNAL MODERATOR:

MRS J WILLIAMSON

DURATION: 2 HOURS

MARKS: 50

NUMBER OF PAGES: 2 PAGES

INSTRUCTIONS: ANSWER ALL THE QUESTIONS.

REQUIREMENTS: EXAM BOOK

BOT0087 – SCIENTIFIC METHODS

QUESTION 1

Study the microslide of *Celtis africana* wood, and answer the questions:

- 1.1 Name the red stain used for this microslide, and the substance stained by this dye. (4)
- 1.2 Identify the following wood traits:
- 1.2.1. Ring-porous wood or diffuse-porous wood. (3)
 - 1.2.2. Perforation plates simple or scalariform. (3)
 - 1.2.3. Intervessel pits scalariform, opposite or alternate. (3)
 - 1.2.4. Rays exclusively uniseriate, exclusively multiseriate, or both. (3)
 - 1.2.5. Rays consist of only procumbent cells, or square/upright ray cells are also abundant. (3)

QUESTION 2

Mention the samples which must be collected in the field together with anatomical materials from the same plant individual. (10)

QUESTION 3

Suppose you need to study the fine structure of the seed coat surface of a watermelon seed.

- 3.1. Which is the method of examination that can be suitable for this study? (6)
- 3.2. Mention the most important steps of sample preparation for this method. (15)

TOTAL [50]

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