



MAASAI MARA UNIVERSITY

**REGULAR UNIVERSITY EXAMINATIONS
2018/2019 ACADEMIC YEAR
THIRD YEAR FIRST SEMESTER**

**SCHOOL OF TOURISM AND NATURAL RESOURCE
MANAGEMENT
BACHELOR OF SCIENCE (FORESTRY)**

**COURSE CODE: FEM 3123
COURSE TITLE: WOOD PROPERTIES**

DATE: 7TH DECEMBER 2018

TIME: 11.00AM- 13.00PM

INSTRUCTIONS TO CANDIDATES

Answer **ALL** questions in section **A** and any other **THREE** in section **B**.

This paper consists of 2 printed pages. Please turn over.

SECTION A

Question 1

- (a) Identify six characteristic properties of wood as a natural material (6 marks)
(b) State any six factors that control designation of commercial wood (6 marks)

Question 2

- (a) Briefly discuss the two main groups of commercial timbers (4 marks)
(b) Explain the drawbacks of classifying wood in vernacular/Trade names (4 marks)
(c) Briefly discuss the importance of knowing the properties of wood species been used for commercial purposes/in the market (5 marks)

SECTION B

Question 3

- a) Compare the properties of each type of reaction wood with normal wood (8 marks)
(b) Discuss in details the main chemical components of wood material and the basic building elements. (7 marks)

Question 4

- (a) Briefly describe the gross features revealed by cross-section of a mature log (6 marks)
(b) Give some details of Sapwood and Heartwood properties (4 marks)
(c) Explain why hardwoods are generally more permeable than softwood during chemical treatment (5 marks)

Question 5

- (a) State the physical properties of Earlywood and latewood wood cells using illustrations where possible (6 marks)
(b) In reference to Wood-water relationships write short notes on the following terms
(i) Free Water (3 marks)
(ii) Bound water (3 marks)
(iii) Fibre saturation point (3 marks)

Question 6

- (a) Give the properties of wood lignin and some possible uses (6 marks)
(b) Discuss the wall call layering structural arrangement using illustrations where possible (6 marks)
(c) State any six factors that affect natural durability of any wood species (3 marks)

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