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UNIVERSITY OF KABIANGA  
SCHOOL OF NATURAL RESOURCE AND ENVIRONMENTAL MANAGEMENT  
SEMESTER ONE 2017/2018  
FOR 216: DENDROLOGY  
Main Examination

Marks = 70

Time allowed 3 Hours

Instructions to Candidates: Answer all questions in section A and any two questions in section B.

Section A: (30 Marks)

1. Distinguish the following terms as used in dendrology:
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|-------------------------------------|-----------|
| (i) Identification and Nomenclature | (2 marks) |
| (ii) Flora and forest               | (1 mark)  |
| (iii) Tree and Shrub                | (2 marks) |
| (iv) Climbers and Lianas            | (1 mark)  |
2. Explain the following authority citation:
- |  |           |
|--|-----------|
| (i) <i>Polyscias fulva</i> (Hiern) Harms | (2 marks) |
| (ii) <i>Pinus patula</i> Schldl. & Cham. | (2 marks) |
3. Discuss five principle objectives and scope of Dendrology. (10 marks)
4. Explain the evolutionary and botanical differences between gymnosperms and angiosperms. (10 marks)

SECTION B (40 Marks): Answer ANY TWO questions

5. Describe how you would identify the following tree species in South West Mau Natural Forest from field and laboratory observation of their bark, leaf and floral/ cone characters:
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|---|------------|
| (i) <i>Podocarpus latifolius</i> (Thunb.) Mirb.   | (10 marks) |
| (ii) <i>Hagenia abyssinica</i> (Bruce) J.F. Gmel. | (10 marks) |
6. Cypress and Eucalyptus are some of the most extensively grown hardwood and soft wood trees in Kenya. Provide a concise taxonomic description of any named species of the two trees with particular reference to the following:
- |               |           |
|---------------|-----------|
| (i) Family    | (6 marks) |
| (ii) Genus    | (6 marks) |
| (iii) Species | (8 marks) |
7. Forestry and Agroforestry students of University of Kabianga were in agreement that a specimen they collected from Kakamega Forest was *Zanthoxylum gillettii* (De Wild.) Waterm. and that it belongs to Rutaceae family and not Myrtaceae family. Explain the reasons for this agreement. (20 marks)

END