

**W1-2-60-1-6**

**JOMO KENYATTA UNIVERSITY**

**OF**

**AGRICULTURE AND TECHNOLOGY**

**UNIVERSITY EXAMINATIONS 2013/2014**

**YEAR 4 SEMESTER I EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE IN PLANT ECOLOGY AND ENVIRONMENTAL SCIENCE**

**SBT 2406: FOREST ECOLOGY**

**DATE: AUGUST 2013 TIME: 2 HOURS**

**INSTRUCTIONS: ANSWER QUESTION ONE AND ANY OTHER TWO QUESTIONS IN SECTION B**

**QUESTION ONE –COMPULSORY**

A i) Briefly discuss the economic productivity potential of tropical forests (4mks)

 Ii Differentiate between silviculture and forestry (2mks)

 iii) Briefly discuss the intermediate disturbance hypothesis (4mks)

 iv) Briefly describe the role of Kenya Forest Act 2005 in the conservation of forests.

 (5mks)

B i) Explain the factors necessary for natural forest regeneration (4mks)

 ii) Why is there a deficiency of saplings on tropical forest floors? (4mks)

C i) What is carbon offsetting? Explain (2mks)

 ii) Briefly describe the independent control variables that govern forest ecosystem

 structure and functioning (5mks)

**QUESTION TWO (20 MARKS)**

What are the benefits and disadvantages of agro forestry systems? Discuss using relevant examples.

**QUESTION THREE (20 MARKS)**

Discuss the structure and role of the water tower forests in Kenya.

**QUESTION FOUR (20 MARKS)**

Discuss the non-consumptive functions of forests and argue the case for their conservation.