

**UNIVERSITY OF RUHUNA  
BACHELOR OF SCIENCE (GENERAL) DEGREE LEVEL III  
(SEMESTER I)  
EXAMINATION – NOVEMBER 2021**

**SUBJECT: ADVANCED PLANT ECOLOGY  
BOT 3112**

**COURSE UNIT:**

**Time: One and half Hour**

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Answer **ONLY THREE** questions including question number **ONE**.

1)

i) What do you mean by the term “biodiversity”?

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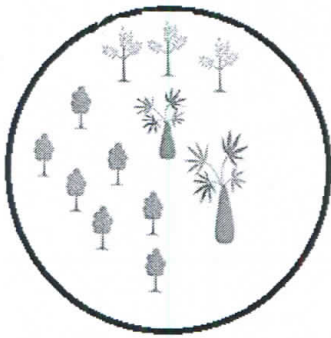
(10 Marks)

ii) State major threats on biodiversity?

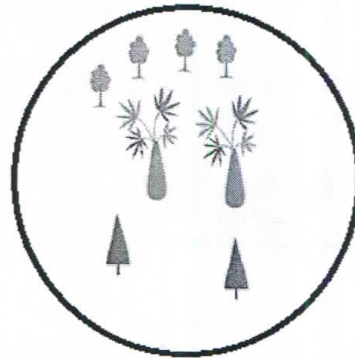
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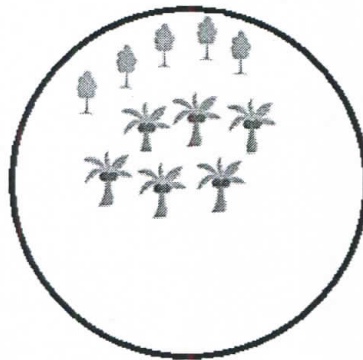
iii) Question number from iii a to iii c are based on the following diagrammatic illustration.



Site A



Site C



Site B

a) Calculate the **Alpha diversity** in site A, site B, and site C.

Site A .....

Site B .....

Site C .....

(6 Marks)

b) Calculate the **Beta diversity**.

Between site A and B .....

Between site B and C .....

Between site A and C .....

(9 Marks)

c) Calculate the **Gamma diversity** of sites A,B,and C. ....

(5 Marks)

iv) Define the term "threatened species".

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(10Marks)

v) What do you understand by "habitat fragmentation"?

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(15 Marks)

vi) List five objectives of conservation of biodiversity.

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(15 Marks)

vii) What do you understand by *in-situ* conservation? and state its advantages.

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(20 marks)

2) Write an essay on “The Effects of Climate Change on Biodiversity”. (100 marks)

3).

i) What are the importance of grasslands? (15 marks)

ii) List the threats that affect on existence of grasslands. (15 marks)

iii) Briefly explain how do you determine the “species density” in a given grassland. (70 marks)

4). Write short notes on the followings.

i) Desert biome (40 marks)

ii) Ecological Succession (30 marks)

iii) Endemic species (30 marks)