UNIVERSITY OF RUHUNA

BACHELOR OF SCIENCE (GENERAL) DEGREE LEVEL III (SEMESTER I) EXAMINATION – JULY 2016

SUBJECT: BOTANY **COURSE UNIT: BOT 3112**

Time: One and half Hour

Answer any **three questions only**

1) i) Explain the differences between the seagrasses and the seaweeds.

ii) What are the ecological requirements for the growth of seagrasses?

iii) Give an outline of the significance of seagrass ecosystems.

iv) List the current threats on coastal seagrass ecosystems.

2) Write an essay on the significance of community interactions for maintaining the balance in an ecosystem.

3) Write short notes on following.

i) Ecological succession

ii) Amphibious plants

iii) Desert biome

iv) Ecological amplitude

4).

a)

i) Write an account on "Importance Value Index (IVI)" in an ecological study.

ii) List the steps that you would follow in the calculation of the productivity of vegetation?

b)

i) Describe the different type of quadrates used in quantitative studies.

ii) Write an account on the advantages and disadvantages in the use of quadrates in an ecological study.

c) Table 1 shows the results of an ecological study of a grassland carried out by undergraduate students. Answer the following questions using the given data in the table.

Size of the quadrate	Recorded number of grass species (A,B,C,D,E,F,G*)							Total number of grass species
	A	B	C	D	E	F	G	
10x10 cm	6	2						02
20 x20 cm	7	3	2					03
30x30 cm	5	3	5	2	2			05
40 x40 cm	6	5	5	3	3	5		06
50x50 cm	8	6	3	5	5	4	1	07
60x60 cm	6	5	4	5	3	5	1	07

*A,B,C,D,E,F and G different grasses species

i) Briefly explain an appropriate method to determine the optimum size of the quadrate suitable to study the grassland.