

THE OPEN UNIVERSITY OF SRI LANKA  
B.Sc. / B. Ed. DEGREE PROGRAMME – 2011/2012  
LEVEL 04 - BOU 2102 / BOE 4102  
SYSTEMATICS OF HIGHER PLANTS AND ANIMALS  
OPEN BOOK TEST  
DURATION – ONE (01) HOUR



Reg. No. ....

Date: 03<sup>rd</sup> September 2011

Time: 4.00 – 5.00 pm

Answer All Questions. Answers should be written in the space provided.

**PART A (30 minutes)**

01. What is meant by each of the following statements?
- a. Systematics is a dynamic subject with never ending synthesis.  
.....  
.....
  - b. Preliterate humans were practical plant taxonomists.  
.....  
.....
  - c. Identification includes classification and nomenclature too in practice.  
.....  
.....
  - d. Botanical gardens play a major role in plant conservation.  
.....  
.....
  - e. Legitimate naming of a plant taxon is based on the principle of priority.  
.....  
.....
02. a. State the two (02) main objectives of the International Code of Botanical Nomenclature (ICBN).
- i. ....
  - ii. ....

b. '*Vatica zeylanica* is the basionym of *Garcinia zeylanica*.' Explain in terms of plant nomenclature.

.....  
.....

03. State **two (02)** major contributions of Linnaeus towards plant taxonomy.

i.....  
ii.....

04. What is the major role of a taxonomist in biodiversity conservation?

.....  
.....

05. What is the main objective of flora revisions?

.....  
.....

06. Differentiate between the following.

i. National and regional herbaria

National

Regional

.....	.....
.....	.....
.....	.....

ii. Natural and phylogenetic classification systems of plants

Natural

Phylogenetic

.....	.....
.....	.....
.....	.....

Reg. No. - .....

**BOU 2102 - PART B (30 minutes)**

01. a. Define biological classification.  
.....  
.....
- b. What are the **two (02)** basic principles of biological classification?  
i.....  
ii .....
- c. In some cases, the two principles of biological classification disagree, resulting in different classificatory groupings. Give **one (01)** example for such cases and outline the main reason.  
  
Example - .....  
.....  
  
Reason - .....  
.....
- d. List **four (04)** main objectives of biological classification.  
i.....  
ii .....  
iii.....  
iv .....
- e. What is the category of biological classification that is considered as natural?  
.....
02. a. State the criteria on which the following classification schemes were based?  
i. Five-Kingdom scheme of Whittaker (1969)  
.....  
.....

ii. Five - Kingdom scheme of Margulis and Schwartz (1996, 1998)

.....  
.....

iii. Three - Domain system of Carl Woese (1990)

.....  
.....

b. The Five-Kingdom system of Whittaker (1969) was accepted as an advance over the previous systems. Why?

.....  
.....

c. Why do taxonomists prefer the Five-Kingdom system over the Three - Domain system?

.....  
.....  
.....

d. How do you differentiate between kingdoms and domains.

.....  
.....

03. a. List two (02) major contributions of each of the following scientists towards the development of animal classification.

A. Linnaeus

i.....  
ii.....

B. Cuvier

i.....  
ii.....