

# UNIVERSITY OF RUHUNA

## BACHELOR OF SCIENCE (GENERAL DEGREE) LEVEL I (SEMESTER II)

EXAMINATION – January, 2018

**SUBJECT: BOTANY**

**Time: 1 hour**

**Course unit:** Plant Systematics (BOT 1221)

**Answer two questions including question No. 1**

(1)

- i) Who are creditable for introducing the following **(10 marks)**
- Phylogenetics/ cladistics -
  - Father of plant taxonomy -
  - Establishment of Kew gardens -
  - Numerical taxonomy -
  - Molecular systematics -
- ii) Explain the necessity of having scientific names of plants instead of vernacular names? **(10 marks)**
- iii) Give five species epithets used in scientific names of plants mentioning how they have been derived from distinguishing characters of the plant. **(20 marks)**
- iv) List the **principles** used in International Code of Botanical Nomenclature (ICBN). **(10 marks)**
- v) What are the concepts established by the International Code of Botanical Nomenclature (ICBN). **(10 marks)**
- vi) Some common plant families are permitted to use the traditional names instead of the scientific name (standardized name) according to the ICBN. Write the five traditional and standardized names for some common plant families. **(20 marks)**
- vii) Fill in the table giving botanical names for each. **(20 marks)**

Vegetable plants	Medicinal plants
1.	1.
2.	2.
3.	3.
4.	4.
5.	5.
Toxic plants	Herbs
1.	1.
2.	2.
3.	3.
Woody plants	4.
1.	5.
2.	

- 2.
- i) Briefly explain the steps followed to identify an unknown plant. (30 marks)
- ii) Mention the advantages and disadvantages of artificial and natural classification systems. (40 marks)
- iii) Describe the classificatory work of Carolus Linnaeus to plant systematics. (30 marks)
3. Write short notes on:
- a) Ancient literature of plant systematics (20 marks)
- b) Chemotaxonomy data for classification of plants (10 marks)
- c) Natural classification systems (20 marks)
- d) Type specimens (15 marks)
- e) Classification of the Angiosperm Phylogeny Group (APG) (10 marks)
- f) Historical development of Sri Lankan Flora after independence (25 marks)