



**RAJARATA UNIVERSITY OF SRI LANKA
FACULTY OF APPLIED SCIENCES**

**B.Sc. (General) Degree in Applied Sciences
Second Year – Semester I Examinations – October/November 2015**

BIO 2201- SYSTEMATICS IN BIOLOGY

Time: Two (02) hours.

Answer Question no. 01 and any three (03) of the others.

1. a. Use of chemicals as preservatives in storage is not practiced any more in herbaria. What is the alternative method followed in National Herbarium, Peradeniya?
- b. State any two uses of the pocket attached to the herbarium sheet in dry herbarium specimens.
- c. Name any three colours used for folders storing herbarium specimens in National Herbarium, Peradeniya and state the information you could get from each of these colours.
- d. State major categories of chromosome number variations in angiosperms, used as taxonomic evidence.
- e. Give three reasons which make flavonoids suitable as a source of taxonomic evidence. What is the most abundant flavonoid in plant kingdom?
- f. A student referring a taxonomic book found names of plants written in the following manner. Explain what is meant by each of it.
 - (i) *Cassia fistula* (L.) Ben.
 - (ii) *Phyllanthus* Linn. ex Mull.
 - (iii) *Dipterocarpus indicus* Mab. (2000) Nom illequit non L. (1925); *Dipterocarpus zeylanicus* (2009)
 - (iv) *Pterocarpus santalinus* L. emend Pers.

2. "Foundation stone for plant systematics in Sri Lankan flora was laid by foreign scientists".

Do you agree with this statement? Justify your answer.

3. Write short notes on the following.

- a. Colour preservation of hardy plant material for storage
- b. Type specimens used in plant taxonomy

4. "DNA could be used to determine taxonomic relationships among plants".

Discuss the above statement.

5. a. What is meant by a dendrogram in numerical taxonomy? State three advantages of numerical taxonomy.

- b. "Plant taxonomy provides evidence for Forensic Science". Justify this statement using **any three** suitable examples.
