



THE OPEN UNIVERSITY OF SRI LANKA
B. Sc. / B. Ed. DEGREE PROGRAMME –LEVEL 04
BOU2102/BYU4302/BYE4302- SYSTEMATICS OF HIGHER PLANTS AND ANIMALS
FINAL EXAMINATION- 2017/2018
DURATION: TWO (02) HOURS

Date: 16th September 2018

Time: 9.30am-11.30am

This paper consists of two parts; Part A and B. Answer **any four (04)** questions.

PART A

01. Write a concise essay on the development of botanical classification systems. Cite the authors contribute to each of the system where appropriate.
02. Write short notes on any three (03) of the following.
 - i) ELISA method used in plant systematics
 - ii) Major steps in herbarium techniques
 - iii) Secondary metabolites used in plant systematics
 - iv) Ethical behavior in conducting plant taxonomic research
03. A group of scientists have found a degraded leaf specimen. According to preliminary studies and morphological studies it is identified as a plant belonging to family Apocynaceae. Briefly explain the methodology and techniques you would follow at the DNA level to confirm its taxonomic position and the phylogenetic relationships of that plant with respect to other members of the family. Use diagrams where appropriate.
04. Different types of characters have been utilized in systematic studies as taxonomic evidences.
 - i) What do you mean by character weighting in systematics?
 - ii) List 6 different type of characters/data (evidences) used in taxonomy other than the morphological characters.
 - iii) With cited examples and applications briefly describe any two of the characters mentioned in part (ii).
05. Systematics is the scientific study of the kinds and diversity of organisms together with all relationships existing among them.
 - i) State four main roles of systematics.
 - ii) What is meant by identification?
 - iii) Briefly discuss four different methods used in correct identification.

PART B

06. a) Give one scientific name /example for the following:

- i) Author citation
- ii) Name of the Journal
- iii) Changing names by including a sub generic name
- iv) Tautonym
- v) By changing the generic name

b) Explain four (04) advantages and four (04) disadvantages of using scientific names over vernacular names using examples.

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