

**THE OPEN UNIVERSITY OF SRI LANKA**  
**B.Sc. / B.Ed. DEGREE PROGRAMME - LEVEL 04**  
**BTU 2103 / BTE 4103 / BTI 4103**  
**SYSTEMATICS OF PLANTS AND ANIMALS**



**OPEN BOOK TEST - 2006/2007**

**DURATION - ONE (01) HOUR**

Reg. No. ....

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**Date : 21 . 07. 2006**

**Time 4.00 - 5.00 p.m.**

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**Answer All Questions.**

**Questions should be answered on the question paper itself.**

1. Give the terms used to denote the following in Systematics.
  - i. Characters which are sufficient to be used alone for reaching a correct diagnosis of a plant - .....
  - ii. Classification of plants based on habit and importance to man-.....
  - iii. Legitimate names of a plant excluding the correct name - .....
  - iv. Internationally accepted rules and regulations to name plants - .....
  - v. Taxonomic groups or ranks, according to ICBN - .....
  - vi. A name that is in contrary to the rules and regulations of ICBN - .....
  - vii. Two names based on two different types but applied to the same plant species - .....
  - viii. The constituent element of a plant species to which its name is permanently attached - .....
  - ix. Independent evolution of two isolated gene pools - .....
  - x. Reflection produced by the genetic make up of an organism, by interacting with its environment - .....

2. Explain the following in terms of plant nomenclature.

4.

a. *Lupinus* [Tourn.] Linnaeus (1753)

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b. *Ipomoea tuberculata* Rendo in Sargent. 1963

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3. State the contribution made by the following, to the development of Plant systematics.

a. Herbalists

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b. Arthur Cronquist

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4. Give reasons for the following.

a. The language used in plant classification is Latin.

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b. Phenotypic plasticity is largely peculiar to plants than animals.

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c. The use of taxonomic keys is considered as one of the best ways of plant identification.

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d. Classification systems of plants and animals change very often?

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5. What is meant by the following?

a. A posteriori weighting of characters

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b. Similarity Coefficient

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**PART B**

**Reg. No. - .....**

01. a. Explain how a species is defined according to the morphological species concept.

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b. Give one draw back of the morphological species concept.

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02. a. Distinguish between phyletic speciation and true speciation.

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b. Why is it considered that the isolation of gene pools plays a major role in speciation process?

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c. When do we observe competition between two populations?

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d. What are the outcomes of competition between two populations?

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03. Using your knowledge in nomenclature, answer the following questions.

a. Who introduced the dual naming system?

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b. What are the criteria that have to be fulfilled in valid publication of a scientific name of an organism?

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c. Briefly explain the difference between a homonym and a synonym.

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d. Under Zoological Nomenclature, why do we place the name of the author of some scientific names in square brackets?

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e. Explain how a sub generic name differs from a generic name.

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f. Give two (02) methods which are used in citation of hybrids.

i.....

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ii.....

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