

THE OPEN UNIVERSITY OF SRI LANKA
B.Sc./ B.Ed. DEGREE PROGRAMME- 2015/2016
LEVEL 04 – BOU 2102/ BOE 4102
SYSTEMATICS OF HIGHER PLANTS AND ANIMALS
OPEN BOOK TEST
DURATION - ONE (01) HOUR



Reg. No:.....

Date : 10th April 2016

Time: 2.30- 3.30 pm

Answer all Questions in PART A within the given space.

PART A (Botany) (30 Minutes)

(01) Underline the correct answer

- A. The term Taxonomy was introduced by
(a) Meyer
(b) Linnaeus
(c) de Candolle
(d) Takhtajan
- B. A system of classification that defines ancestry of plants/animals is known as
(a) Natural System
(b) Artificial System
(c) Phylogenetic system
(d) Homologous system
- C. A taxon is
(a) a group of related families
(b) a group of related species
(c) a type of living organisms
(d) a taxonomic group of any ranking
- D. The book having binomial nomenclature for the first time is
(a) Methodus Plantarum
(b) Species Plantarum
(c) De historia stirpium
(d) Historia Plantarum
- E. The advantage of Systematics is that it
(a) gives an idea of organic diversity, its origin and evolution in the plant and animal kingdom
(b) is complementary to other branches of Biology
(c) provides correct information needed in agriculture, medicine etc.
(d) All of these

02. State whether these statements are True (T) or False (F)

- (a) Term Systematics is much broader than the term Taxonomy..... (b) Phylogeny is not considered in taxonomy
- (b) John Gerard is not considered as a Herbalist
- (c) In a Herbarium plant materials are deposited only in dry form.

- (d) Charles Bessey was Russian scientist.
- (e) A Monograph is a comprehensive account of a taxon of any rank at any time.
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- (f) Arboretum is an area dedicated for herbs and medicinal plants.
- (g) International Code of Botanical Nomenclature usually meets every three (03) years.
- (h) The suffix "aceae" refers to a of order of plants.
- (i) Classification system of Bentham and Hooker is a natural system.
- (j) Hortus Zeylanicum was published by George Gardener.

03) Write the differences between the following

a. Herbalists

Taxonomists

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b. Subjective synonyms

Objective synonyms

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c. Technical keys

Field Keys

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d. Mechanical classification systems

Phylogenetic classification systems

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e. Flora Zeylanica

Hortus Zeylanicum

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Part B (Zoology)

Registration No:

There are 03 questions in part B. Answer all questions in **Part B**. Answers should be written in the space provided

Question No: 01

Underline the correct answer

1.1. The group with unknown evolutionary relationship is:

- (a) Monophyletic (b) Polyphyletic (c) Paraphyletic (d) None

1.2. Which one of the following has traditional approach in systematics?

- a) Evolutionary (b) Phyletic (c) Numerical (d) All

1.3. A group of organisms any particular level in a classification system is called a

- a) Species (b) genus (c) taxon (d) phylum

1.4. Scientific names higher than genus are to be

- a) capitalized but not printed distinctively, italicized or underline
b) italicized or underlined
c) capitalized and italicized or underlined
d) italicized or underlined with the first word capitalized

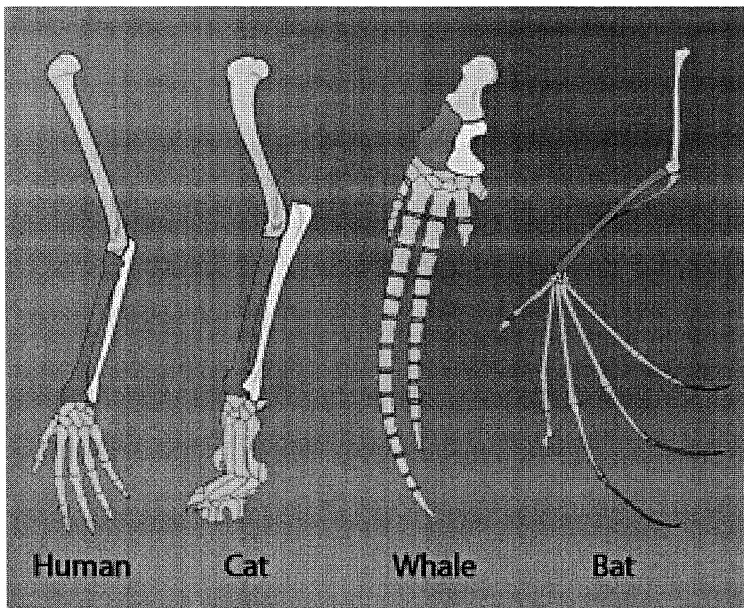
1.5. Systematics deals with,

- a) Identification of organisms
b) Classification of organisms

- c) The kinds and diversity of all organisms and the existing relationships amongst them
- d) Identification, naming and classification of both plants and animals

Question No: 02

2. Write short answers. Use the Fig.1.1 to answer the questions 2.1-2.5.



2.1. Fig. 1.1 shows different types of fore limbs. Name the type of character which they can be categorized?

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2.2. What are the functions of the given fore- limbs in Fig.1.1?

Human.....

Cat

Whale

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Bat

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2.3. What do these structures indicate about the evolution of four organisms?

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2.4. What would be an example of a structure analogous to structure of "Bat"?

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2.5. How does the anatomy of the fore limbs show an evolutionary pattern?

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Question No : 03

Describe the followings as much as possible.

i. *Boiga ranawanei*

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ii. *Rana limnocharis* Wiegmann, 1835.

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iii. *Srilankamys ohiensis* (Phillips, 1729) Erxleben 1777.

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iv. *Rana (Haplobatrachus) ceylanica* , Gunther, 1872

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