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

ASSESSMENT TEST (NO BOOK TEST) - 2006/2007

DURATION – ONE (01) HOUR

Reg. No. .....

Date : 02. 09. 2006 **Time 4.00 – 5.00 p.m.**

Answer All Questions.
Questions should be answered on the question paper itself.

PART A

01. What is meant by the following?

a. Phylogeny

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b. Classification

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c. Biosystematics

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.....

d. Dichotomous key

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.....

e. Vrikshayurveda

.....

.....

f. Author of a scientific name

.....

.....

02. Give the terms used to denote the following.

i. Process by which one species gives rise to one or more species - .....

ii. The oldest legitimate name of a plant - .....

iii. A single valid name used for naming two different plants- .....

iv. Two names applied to the same taxon, based on a single type - .....

v. Genetic make up of an organism - .....

vi. Variations shown by the phenotype in response to environmental fluctuations -

.....

03. Give the new names for the following families.

i. Graminae - .....

ii. Palmae - .....

04. a. Identification is one of the main aspects of taxonomy. Give two (02) general purposes of identifying plants.

i.....

ii.....

b. What is a taxonomic Key?

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c. List different types of keys used in plant identification.

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05. Explain the contribution made by Linnaeus, to the development of Plant systematics.

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06. List the information one can obtain from a catalogue, in relation to the taxonomy of a plant species.

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PART B - (30minutes)

01. A taxonomist studied four different samples of specimens, A, B, C and D. His observations are indicated in the **Table 1** given below.

Using your knowledge about the discriminating grid, at what conclusions do you arrive about the relationship of the specimens A, B C and D? Space is provided for you to give your conclusions relevant to the observations.

Table 1

Observations	Conclusions
1. Specimens A and B are sympatric, but reproductively isolated. The two specimens are morphologically identical.	1.....
2. Specimens A and C are allopatric, but reproductively not isolated. The two specimens are morphologically different.	2.....
3 Specimens A and D are allopatric and reproductively isolated. The two specimens are morphologically different.	3.....
4. Specimens C and D are sympatric and reproductively isolated. The two specimens are morphologically different.	4.....

02. Give **four (4)** ecological variations that can be seen among the individuals of a population.

i.....

ii.....

iii.....

iv.....

03. (a) What is Numerical Taxonomy?

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(b) **Figure 2** is a schematic diagram showing a matrix of hypothetical similarity coefficients between pairs of taxa: the magnitude of the coefficient is shown by the depth of shading. Using the empty figure given, do a cluster analysis to identify the main phenatic groups.

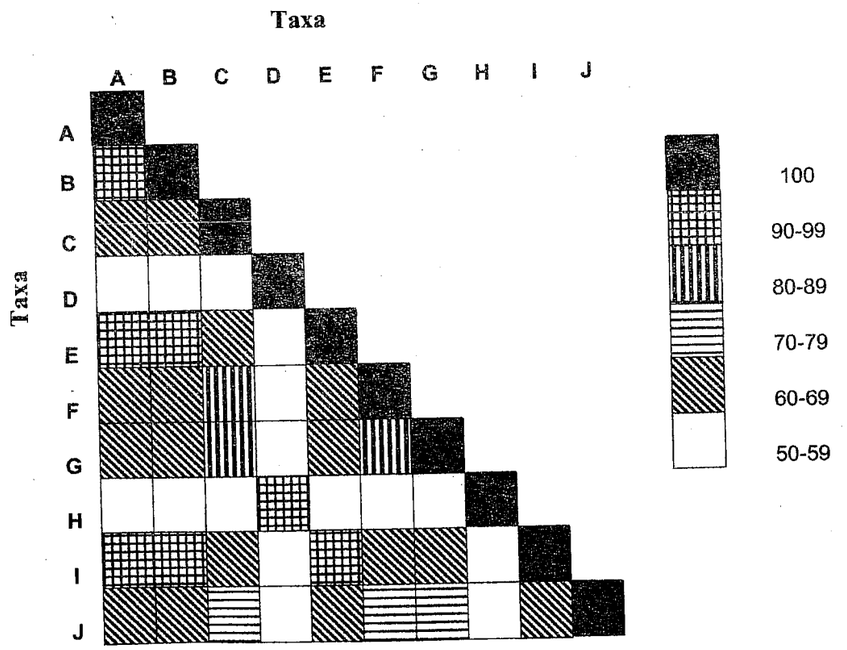


Figure 2

0.

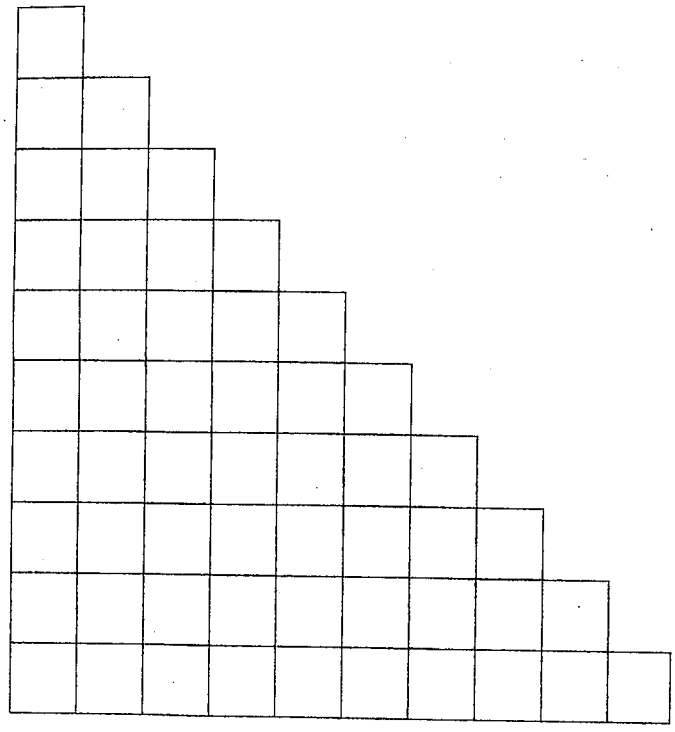
i.

ii

ii

iv

v.



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04. Give **five (05)** important points that should be included when describing a new animal species according to the International Code of Zoological Nomenclature.

i.....

ii.....

iii.....

iv.....

v. .....