

D 72900

(Pages : 2)

Name.....

Reg. No.....

FIRST SEMESTER M.Sc. DEGREE EXAMINATION, DECEMBER 2014

(CUCSS)

Zoology

ZO IC T03—SYSTEMATICS AND EVOLUTION

Time : Three Hours

Maximum : 36 Weightage

I. Answer the following :—

- 1 Define “gamma taxonomy”.
- 2 What is meant by DNA bar coding ?
- 3 What is the importance of a taxonomic key ?
- 4 Mention the significance of ICZN.
- 5 Define hierarchial classification.
- 6 What is a sibling species ?
- 7 Distinguish between “Polytype” and “Monotype” species.
- 8 Note down the importance of Von-Baer’s law.
- 9 What is meant by “Molecular Drive” ?
- 10 Briefly explain “Kin Selection”.
- 11 What is meant by “Epistasis” ?
- 12 Precisely explain “Genetic equidistance”.
- 13 Briefly express the concept of “Gene Pool”.
- 14 What are “Ecotypes” ?

(14 × 1 = 14 weightage)

Part BII. Answer any *seven* of the following :—

- 15 What is a “pictorial key” ? Explain its role in Taxonomy.
- 16 Describe the application of serological techniques in Taxonomy.
- 17 Assess the relevance of “storage and recovery” of data in classification.
- 18 Explain what is typological classification.
- 19 Comment on the “Taxonomic diversity” within a species.
- 20 Write a brief account on “Molecular Systematics”.

Turn over

- 21 Citing an example, explain directional selection.
- 22 Give a concise account on "coevolution".
- 23 Give a brief account of "homologous sequence" of proteins and DNA with reference to phylogenetic relationship.
- 24 Briefly explain what is biochemical evolution.

(7 × 2 = 14 weightage)

III. Answer any *two* of the following ::—

- 25 Explain the principles and rules of International code of Zoological nomenclature.
- 26 Give a critical evaluation of the impediments that come across in Taxonomic studies.
- 27 Explain the significance of various isolation mechanisms in species emergence.
- 28 Evaluate the molecular basis in the phenomenon of evolution.

(2 × 4 = 8 weightage)