SECOND SEMESTER M.Sc. DEGREE EXAMINATION, MAY 2018

(CUCSS - PG)

(Zoology)

CC17P ZO2 C06 - SYSTEMATICS AND EVOLUTION

(2017 Admission: Regular)

Time: Three Hours   Maximum:36 Weightage

I.   Answer *all* the following questions:

1. Cenospecies.

2. DNA barcoding.

3. Genes used in the barcoding of plants and animals.

4. Molecular taxonomy.

5. Chemotaxonomy.

6. Numen nudum and undescribed taxon.

7. Synonym.

8. Lectotype.

9. Directional selection.

10. Differentiate simians and prosimians.

11. Evolution of speech capacity in primates.

12. Explain parallel evolution.

13. Bottle neck effect.

14. Good gene hypothesis.

(14 x 1 = 14 Weightage)

II. Answer any *seven* of the following questions**:**

15. Enlist the differences between systematics and taxonomy.

16. When does a classical taxonomist require the help of a molecular taxonomist?

17. What is Phenetics?

18. Write a brief note on the merits and demerits of taxonomic keys.

19. Write a short note on the undesirable features of a taxonomic paper.

20. Explain the curation of specimens.

21. Differentiate monophyletic and paraphyletic groups.

22. Explain Y chromosome Adam and Mitochondrial Eves:

23. What is Molecular divergence?

24. Write on nucleotide sequence analysis in phylogenetic evolution.

(7 x 2 = 14 Weightage)

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

    25. Write an essay on Co-evolution and co-evolutionary arm race.

    26. Explain the evolution of wet and dry nosed primates.

    27. Explain the various species concepts in taxonomy.

    28. Write an essay on International Code of Zoological Nomenclature.

(2 x 4 = 8 Weightage)

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