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Name.....

Reg. No.....

**SECOND SEMESTER M.Sc. DEGREE (REGULAR/SUPPLEMENTARY)
EXAMINATION, APRIL 2021**

(CBCSS)

Zoology

ZOL 2C 06—SYSTEMATICS AND EVOLUTION

(2019 Admissions)

Time : Three Hours

Maximum : 30 Weightage

General Instructions

1. *In cases where choices are provided, students can attend **all** questions in each section.*
2. *The minimum number of questions to be attended from the Section / Part shall remain the same.*
3. *There will be an overall ceiling for each Section / Part that is equivalent to the maximum weightage of the Section / Part.*

Part A

I. Answer any *four* questions. Each question carries 2 weightage :

- 1 Empiricism.
- 2 Superspecies.
- 3 Levels of taxonomy.
- 4 Linnaean hierarchy.
- 5 Gradualism.
- 6 Y-MRCA.
- 7 Homoplasy.

(4 × 2 = 8 weightage)

Part B

II. Answer any *four* questions. Each question carries 3 weightage :

- 8 Explain type method and its importance in Taxonomy.
- 9 Elaborate on morphological taxonomic characters.
- 10 Explain molecular systematics.

Turn over

- 11 How would you account for the collapse of orthogenesis ?
- 12 Explain how natural selection operates with respect to sexual selection.
- 13 Write on the ethics related to taxonomic publications.
- 14 Elaborate on the various aspects of neutral theory of molecular evolution.

(4 × 3 = 12 weightage)

Part C

III. Answer any *two* questions. Each question carries 5 weightage :

- 15 Elaborate on the various taxonomic impediments. Add a note on the solutions to overcome the impediments.
- 16 Write on different types of taxonomic keys. Mention the merits and demerits of each key.
- 17 Explain different species concepts.
- 18 Explain the significance of population genetics in evolutionary studies.

(2 × 5 = 10 weightage)