

2056
M.Sc. (Bio-Informatics) Fourth Semester
MBIN-8019: Informatics in Biodiversity and Bioethics

Time allowed: 3 Hours

Max. Marks: 60

NOTE: Attempt five questions in all, including Question No. 1 which is compulsory and selecting atleast one question from each Unit.

x-x-x

1. Answer briefly:

- a) Gamma diversity
- b) AIDS
- c) Genetic Drift
- d) Ecosystem Diversity
- e) Co speciation
- f) Reproductive isolation

(6x2)

UNIT - I

2. a) Discuss the role of mutations, recombination and gene conversions in creating genetic variation.
b) Explain the definition, change and mechanism of Microevolution. (2x6)
3. a) Differentiate between selection & genetic diversity.
b) Write a note on Gradualism model of macroevolution. (2x6)

UNIT - II

4. a) Discuss the Indian Biodiversity Portal.
b) Write a note on any web resource for biodiversity informatics. (2x6)
5. a) Explain the biology of vectors with reference to Mosquito.
b) Describe the proteome database of Mosquito. (2x6)

UNIT - III

6. a) Describe the importance of Biosafety in maintaining biodiversity.
b) Explain the therapeutic and non-therapeutic use of genetic engineering. (2x6)
7. a) Discuss the process of *invitro* fertilization and implantation of embryo.
b) Elaborate on Cartagena Protocol on Biosafety and its significance. (2x6)

x-x-x