

Zoology (P.G.)

[CBCS]

M.Sc. Fourth Semester End Examination-2024

[Regular & Supplementary Paper]

PAPER-403

[Ecology Special]

Full Marks: 40

Time: 02 Hrs

The figures in the right hand margin indicate marks.

Candidates are required to give their answers in their own words as far as practicable.

Illustrate the answers wherever necessary.

[Use separate answer script for each group]

Group A

Marks 20

[System Ecology]

1. Answer any two questions from the following: 2x2= 4
- a. What do you mean by ecological economics?
 - b. What is metapopulation?
 - c. Define ecological services.
 - d. State the difference between steady state economics and natural capital.

(2)

2. Answer any two questions from the following: 2x4= 8

- a. State an experimental prove that the population of a selected species of earthworm is restored after a certain time of application of heavy metals in a fly ash contaminated soil.
- b. What are the reasons behind thermal and nutritional stratification in lentic ecosystem?
- c. Prove it: $\left[P = 1 - \frac{c}{m} \right]$
- d. What is ecotourism? State the merit and demerits of ecotourism.

1+3

3. Answer any one question from the following: 1x8= 8

- a. i) Mention the different types of ecosystem services along with their respective function.
ii) Mention the necessary conditions for metapopmtation of local population.
- b. i) What are the difference between deterministic and stochaotic model.
ii) Justify the statement "Metapopulation dynamics" is a balance between colonization and oxtinction".

6+2

4+4

Group-B

Marks 20

[Human Ecology]

1. Answer any two questions from the following: 2x2= 4

- a. What is EIA? Mention its types.

(3)

- b. Differentiate between α, β and γ diversity.
- c. What is ozon layer?
- d. Write your concept on water shed management.

2. Answer any two questions from the following: 2x4= 8

- a. What do you mean by Bioinvasion? Discuss it with suitable example.
- b. Write down the significance of carbon sequestration.
- c. What do you mean by solid waste? Write a note on biomedical wastes.
- d. Describe briefly the functions of watershed in respect of human being and natural environment.

3. Answer any one question from the following: 1x8= 8

- a. Write down the effect of urbanization on biodiversity.
- b. Discuss the causes and consequences of climate change.

=====