

2022

ZOOLOGY

[P.G.]

(M.Sc. Fourth Semester End Examination-2022)

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**

**[System Ecology]**

**[F.M. – 20]**

1. Answer any two questions from the following: 2x2= 4
- a) State the difference between Deterministic and stochastic model.
  - b) What are the major soil types in West Bengal?
  - c) What is metapopulation?
  - d) What is “Competitive coefficient”?

(2)

2. Answer any two questions from the following: 4x2 = 8

- Write a note on Leaf litter decomposition.
- Write down the merits and demerits of ecotourism.
- Prove it  $\Rightarrow \left[ P = 1 - \frac{e}{m} \right]$  Where P = equilibrium value  
 $e$  = probability of going extinct  
 $m$  = probability of colonization
- Write a note on ecosystem services.

3. Answer any one questions of the following: 1x8 = 8

- What is ecological restoration? State an experimental prove that the population of selected soil fauna is restored after a certain time of application of pesticides 2+6=8
- Graphically draw and discuss the four consequence of the Lotka-Vollerra competition equations.

**Group-B**

**[Human Ecology]**

**[F.M. – 20]**

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

- What is watershed management?
- What is EAP?
- Mention the sources of indoor pollution.

(3)

d) What is stone cancer?

5. Answer any two questions from the following: 4x2 = 8

- Briefly categorised wasteland on the basis of quality and productivity.
- Write a note on thermal inversion.
- What is Biomedical waste? State its management process.
- What is carbon sequestration? State in brief its role in climate change. 2+2

6. Answer any one question of the following: 1x8 = 8

- Write down the objectives of EIA. Classify the EIA on the basis of impact. Mention the different steps of EIA. 2+2+4
- Write down the effect of Urbanization on biodiversity.

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