

2022

(CBCS)

(1st Semester)

ZOOLOGY

(Honours)

Paper Code : ZOO.C-2

(Principles of Ecology)

Full Marks : 75

Pass Marks : 40%

Time : 3 hours

*The figures in the margin indicate full marks
for the questions*

1. Give an account on the history of ecology.
Differentiate between autecology and
synecology. 12+3=15

Or

Discuss, in detail, the different levels of
organization in an ecosystem. Add a note on
Blackman's law of limiting factors. 12+3=15

2. Write notes on the following : $7\frac{1}{2} \times 2 = 15$

(a) Population density

(b) Natality

Or

Explain, in detail, the population growth dynamics with graphical representation. 15

3. What is population? Discuss population regulation based on density-dependent and density-independent factors. $1+7+7=15$

Or

Describe the Lotka-Volterra equation for competition and predation. Add a note on the functional and numerical responses in predation. $10+5=15$

4. Write a detailed account on community characteristics with special reference to species richness, dominance and diversity. $5+5+5=15$

Or

Write notes on the following : $7\frac{1}{2} \times 2 = 15$

(a) Vertical stratification in pond and grassland communities

(b) Ecological succession

(3)

5. Write an essay on the types of ecosystems taking one example. 15

Or

Write notes on the following : $7\frac{1}{2} \times 2 = 15$

(a) Linear and Y-shaped food chains

(b) Nitrogen cycle
