

151/Zool/H/III

UG/2nd Sem/ZOOH/CC-T-03/19

U.G. 2nd Semester Examination - 2019
ZOOLOGY
[HONOURS]

Course Code : ZOOH/CC-T-03

Full Marks : 40

Time : $2\frac{1}{2}$ Hours

The figures in the right-hand margin indicate marks.

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

Answer all the questions.

1. Answer any **five** of the following: $2 \times 5 = 10$
 - a) Explain the Leibig's law of minimum.
 - b) What do you mean by vital index?
 - c) Differentiate between demographic and environmental stochasticity.
 - d) What is meant by self-thinning?
 - e) Write down the full form of NBSAP and NTCA.
 - f) Differentiate between food chain and food web.
 - g) Mention two limitations of ecological pyramids.
 - h) Comment on invasive species.

[Turn over].

2. Answer any two of the following: $5 \times 2 = 10$
- What is a life table and what information is required to construct one? Write a note on different kinds of life table. $1+2+2=5$
 - Population growth reflects the difference between rates of birth and death— Explain the statement. Comment on age specific birth rate. $3+2=5$
 - What is an endemic species? Mention three characteristics that might make a species more susceptible to extinction. What is meant by critically endangered species? $1+3+1=5$
 - What is bottom up control of community structure? Give a note on Simpson's diversity index. $2+3=5$
3. Answer any two of the following: $10 \times 2 = 20$
- Explain the Latka-Volterra equation for competition. What condition is necessary for the co-existence of two species? Differentiate between logistic and exponential models of population growth. $4+2+4=10$
 - Define succession. Give an account of general process of succession in nature. Describe the basic types of succession. $2+3+5=10$

2. Answer any two of the following: $5 \times 2 = 10$
- Describe the different categories of protected areas. Write a note on Project Tiger. Mention three objectives of wildlife protection act - 1972. $4+3+3=10$
 - State the laws of thermodynamics that govern energy flow in an ecosystem. Give an account of ecological pyramids with appropriate diagram. $3+(5+2)=10$
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(2)