

**B.Sc. 1st Semester (Honours) Examination, 2017 (CBCS)**  
**Subject : Zoology**  
**Paper : CC-II**

**Time: 2 Hours**

**Full Marks: 40**

*The figures in the margin indicate full marks.*

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

**Group-A**

Answer any five questions

$2 \times 5 = 10$

1. (a) Define Liebig's law of the minimum.  
(b) Distinguish between autecology and synecology.  
(c) What is metapopulation?  
(d) Difference between *ex situ* and *in situ* conservation.  
(e) Illustrate edge effect.  
(f) What do you mean by food chain and food web?  
(g) What is species richness?  
(h) Define noosphere.

**Group-B**

Answer any two questions

$5 \times 2 = 10$

2. (a) What is life table? Write the differences between *r* & *k* strategies of population.  $1+4=5$   
(b) What is community? Describe any two biodiversity indices with equation.  $1+(2+2)=5$   
(c) What do you mean by biogeochemical cycle? Draw a word diagram of  $N_2$  cycle.  $2+3=5$   
(d) Write a short note on Lotka–Volterra equation for competition.  $5$

**Please Turn Over**

**Group-C**Answer *any two* questions

10×2=20

3. (a) Describe three types of population growth equation. Write short notes on density dependent and independent factors on population regulation.  $3+7=10$
- (b) What is succession? Describe different models of succession.  $2+8=10$
- (c) Define niche. State the 'Box and Pipe' and 'Y' shaped models of energy flow in ecosystem. What do you mean by ecological efficiency?  $2+6+2=10$
- (d) What is conservation? Write four threats to tiger population. Describe management strategies for tiger conservation.  $2+2+6=10$