

2017

ZOOLOGY

( Ecology )

[ Honours ]

( CBCS )

[ First Semester ]

PAPER – C2T

Full Marks : 40

Time : 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*

*Illustrate the answers wherever necessary*

GROUP – A

1. Answer *five* questions from the following : 2 × 5
  - (a) Differentiate between fundamental niche and realised niche.
  - (b) What is an inverted pyramid ?

- (c) Write the full form of IUCN. Name two Tiger Reserves in West Bengal.
- (d) Distinguish between density dependent and density independent factors.
- (e) Define life table.
- (f) Define edge effect.
- (g) Why is leguminous crop rotation used in agriculture?
- (h) Differentiate between food chain and food web.

## GROUP – B

2. Answer *four* questions from the following :  $5 \times 4$

- (a) Consider 2 communities, each made up of total 100 organisms, derived from combination of 5 species *A* to *E*.

Species	Community 1	Community 2
A	22	60
B	19	3
C	20	0
D	22	30
E	17	7

- (i) Compare species richness and species evenness of the two communities.
- (ii) Which community shows higher species diversity ?
- (iii) Differentiate between community and biome. 2 + 1 + 2
- (b) Explain the process of ecological succession with example. 5
- (c) (i) Why do food chains rarely have more than four trophic levels ?
- (ii) Why are wetlands often referred to, as 'Kidneys of our earth' or 'Nature's kidney' ? 3 + 2
- (d) (i) How are homeotherms different from poikilotherms ?
- (ii) What is Red Data Book ?
- (iii) Diagrammatically represent the structure of a Biosphere Reserve. 2 + 1 + 2

- (e) Tabulate the differences between  $r$  and  $k$  population strategies. 5
- (f) State the role of bacteria in nitrogen cycle. 5

GROUP – C

3. Answer *one* question from the following : 10 × 1
- (a) (i) State the advantages of human modified ecology.
- (ii) What is competition coefficient ?
- (iii) Explain the Lotka-Volterra equation for interspecific competition. 5 + 1 + 4
- (b) What do you mean by wildlife conservation ? Briefly describe the management strategies for tiger conservation in india. 4 + 6
-