

- (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

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 x 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