

U.G. 4th Semester Examination - 2024**ZOOLOGY****[HONOURS]****Generic Elective Course (GE)****Course Code : ZOOL-H-GE-T-2****(Comparative Anatomy, Developmental Biology of
Vertebrates and Ecology)****Full Marks : 40****Time : 2½ 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.*

1. Answer any five of the following: $2 \times 5 = 10$
- a) What is osteoderm? Name a mammal where it can be found?
 - b) Why fish heart is called venous heart?
 - c) Write the name and distribution of 9th cranial nerve.
 - d) What are the functional advantages of craniostylic jaw suspension?
 - e) Define ecological equivalence.
 - f) Differentiate between *in-situ* and *ex-situ* conservations with suitable examples.

[Turn Over]

g) What is sere? Compare xerosere and hydrosere.

h) Write two management strategies adopted for tiger conservation.

2. Answer any two of the following: $5 \times 2 = 10$

a) What is ecological succession? Distinguish between primary and secondary succession. Define ecological niche. $2+2+1$

b) Briefly describe different types of membranes found in egg.

c) Define ecological pyramid. Describe different types of ecological pyramids.

$2+3$

d) What are the key provisions of the Wildlife Protection Act?

3. Answer any two of the following: $10 \times 2 = 20$

a) What is ductus caroticus? In which adult animal this artery persists? Give a comparative account of aortic arches in vertebrates.

$2+1+7$

b) Draw and describe the fate map of a chick blastoderm. What do you mean by extra embryonic membrane? Briefly describe its types and functions in chick embryo.

$4+2+4$

c) Distinguish between food chain and food web. Describe energy flow through ecosystem by single channel energy flow model. $3+7$

d) Give a short account of tiger project in West Bengal. Distinguish between National Park, Wildlife Sanctuary and Biosphere Reserve with examples. $5+5$