

U.G. 3rd Semester Examination-2025

ZOOLOGY

[MINOR]

Course Code : ZOO-MI-T-301

(Comparative Anatomy and Developmental Biology)

[NEP-2020]

Full Marks : 25

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.

1. Answer any five of the following: 1×5=5
- a) What are nociceptors?
 - b) Distinguish between horn and antler.
 - c) Define hypsodont and lophodont condition.
 - d) What is sweat gland? Write down its function.
 - e) Define polar body. How many polar bodies are formed in human?
 - f) Define hourglass stomach.
 - g) Distinguish between Morphallaxis and Epimorphosis.
 - h) Distinguish ductus arteriosus from ductus caroticus.

[Turn Over]

2. Answer any **two** of the following: $5 \times 2 = 10$
- a) Draw the structure of Primitive embryonic condition of aortic arches of vertebrates. How are the aortic arches modified in reptiles and birds? $2+3$
 - b) Draw and describe the different respiratory air sacs of *Columba*. $2+3$
 - c) What is archinephros? Describe evolution of Pronephros, Opisthonephros, Mesonephros and Metanephros with suitable diagram and example. $1+4$
 - d) Describe the importance of agglutination and fertilizin - antifertilizin reaction in fertilisation. What is the role of acrosome in fertilisation?
3. Answer any **one** question: $10 \times 1 = 10$
- a) Define regeneration. Describe the process of regeneration of amphibian limb. Distinguish between restorative and reparative regeneration with example. Which organs of human can show regeneration? $2+4+3+1$
 - b) Describe the typical structure of stomach in human. Distinguish stomach of graminivorous from carnivorous birds. State the functions of Rumen, reticulum, omasum and Abomasum in cattle's stomach. $2+4+4$