

Post Graduate Teaching Department of Zoology
An Autonomous Department of
Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur
Programme: M. Sc. Zoology Semester -II (CBCS)
Theory Examination Summer-2023

Code and Name of Paper: PGZO2T4 Paper-2T4-Advanced Developmental Biology

Time: 3hrs

Maximum Marks: 60

Note

- 1. All the questions are compulsory.**
- 2. All questions carry equal marks.**
- 3. Draw well labelled diagrams and charts wherever necessary.**

Q.1 Describe in detail the mechanism of gastrulation in *Drosophila*. **12**
OR

Write notes on-

- (a) Biochemical mechanism of metamorphosis in Amphibia.
- (b) Types of placenta on the basis of villi.

Q.2 Give an account on polymorphism of Termite and Honey bees. **12**
OR

Write notes on-

- (a) Regeneration in tail.
- (b) Apoptosis.

Q.3 Explain the embryonic sexing and cloning. Add a note on ICSI and GIFT. **12**
OR

Write notes on-

- (a) Clinical and economic significance of stem cells.
- (b) Cloning of animal by nuclear transfer.

Q.4 Give an account on role of mutants in human welfare. **12**
OR

Write notes on-

- (a) Chemical and Surgical Contraceptive.
- (b) Pregnancy termination.

Q. 5 Write in brief on the followings: - **12**
(a) Epiboly.

(b) Biological Ageing.

(c) Role of MOET.

(d) SP-10.