

**K-550**

Total Pages : 3

Roll No. ....

**MSCZO-602**

**DEVELOPMENTAL BIOLOGY**

M.Sc. Zoology (MSCZO)

3rd Semester Examination, 2023 (Dec.)

**Time : 2 Hours]**

**Max. Marks : 70**

**Note :** This paper is of Seventy (70) marks divided into two (02) Sections A and B. Attempt the questions contained in these sections according to the detailed instructions given therein. Candidates should limit their answers to the questions on the given answer sheet. No additional (B) answer sheet will be issued.

**SECTION–A**

**(Long Answer Type Questions)**

**Note :** Section 'A' contains Five (05) long answer type questions of Nineteen (19) marks each. Learners are required to answer any Two (02) questions only.

(2×19=38)

1. What is gametogenesis? Describe the process of oogenesis and its significance in a mammal.
2. Explain various cleavage patterns of eggs in the types of chordates you have studied.
3. Compare morphogenetic movements in frog, chick and rabbit.
4. Describe the mechanism of regeneration in Amphibian limb and lens.
5. What are organisers? Summarize the properties of organizers. Describe the role of grey crescent in neural induction.

## **SECTION-B**

### **(Short Answer Type Questions)**

**Note :** Section 'B' contains Eight (08) short answer type questions of Eight (08) marks each. Learners are required to answer any Four (04) questions only. (4×8=32)

1. Summarise changes during cortical reaction when sperm touches the egg surface.
2. Describe various types of blastula found in vertebrates.

3. Write an essay on amphibian metamorphosis.
  4. What is spermiogenesis? Describe in detail and also add a note on its significance.
  5. What is induction? Differentiate between an organizer, inducer and evocator.
  6. Write a brief account of heteromorphic regeneration and super-regeneration.
  7. What do you understand by segmentation? Explain in details.
  8. Explain the various physical, chemical, and cytological factors involved in fertilization.
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