

**S-187**

Total Pages : 3

Roll No. ....

**MSCZO-602**

**Developmental Biology**

M.Sc. Zoology (MSCZO)

3rd Semester Examination, 2022 (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.

**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. Describe the process of fertilization with suitable diagram.

2. Classify with example the various type of eggs found in vertebrates.
3. Discuss the morphological and physiological changes involved in metamorphosis of an amphibian.
4. Write an essay on teratology and its causative factor.
5. Describe the structure of mammalian sperm and the process of spermatogenesis in detail.

## **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. Give an account of neural induction and its mechanism.
2. Define cleavage. What is the significance of cleavage?
3. What are neural crest cells? What do they give rise to?
4. What are fate maps? How are they useful?
5. Give a brief account of morphogenetic movement.

6. Draw a well labelled diagram of the ultrastructure of spermatozoon.
  7. Give an account of changes occurring in the ovum during fertilization.
  8. What is induction? Differentiate between an organizer, inductor and evocator.
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