

**P-230**

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## **MZO-509**

### **Development Biology**

M.Sc. Zoology (MSCZO)

2nd Semester Examination, 2023 (June)

**Time : 2 Hours]**

**[Max. Marks : 35**

**Note :** This paper is of Thirty Five (35) 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 answer 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 Nine and Half (9½) marks each. Learners are required to answer any Two (02) questions only.  
(2×9½=19)

1. Describe the developmental pattern in Metazoans.

2. Describe in detail the process of Fertilization and post fertilization events.
3. Explain the process of Cleavage.
4. What is Neurulation? Explain the primary and secondary Neurulation.
5. Explain the processes of Tetrapod limb development.

### **SECTION-B**

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

**Note :** Section 'B' contains Eight (08) short answer type questions of Four (04) marks each. Learners are required to answer any Four (04) questions only. (4×4=16)

1. Write a short note on the historical roots of developmental biology.
2. Explain the structure of Spermatozoa.
3. Write a short note on mesoderm and endoderm.
4. What do you understand by the terms Transdifferentiation and metaplasia?

5. Differentiate between Apoptosis and Senescence.
  6. Write about gametogenesis.
  7. What is abnormal development?
  8. Write a short note on gastrulation.
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