



**K19P 1135**

Reg. No. : .....

Name : .....

**III Semester M.Sc. Degree (CBSS-Reg./Suppl./Imp.)**

**Examination, October - 2019**

**(2014 Admission Onwards)**

**ZOOLOGY**

**ZOO3C11 : DEVELOPMENTAL BIOLOGY AND ENDOCRINOLOGY**

Time : 3 Hours

Max. Marks : 60

**PART- A**

**(Developmental Biology)**

- I. Answer any **ONE** of the following. **(1x12=12)**
1. Write a detailed account of pre-fertilization and fertilization events.
  2. Describe embryonic induction. Give an account of different types.
- II. Answer any **TWO** of the following. **(2x8=16)**
3. Explain organizer. Enumerate its functions.
  4. Give an account of homeotic gene expression in *Drosophila*.
  5. Write down the mechanisms of axes formation in amphibia.
  6. Explain the role of hormones in gametogenesis.
- III. Answer any **TWO** of the following. **(2x5=10)**
7. Sex determination
  8. Nieukoop centre
  9. Polyspermy

**PART B**

**(Endocrinology)**

- IV. Answer any **ONE** of the following. **(1x12= 12)**
10. Explain the hormonal control of reproduction and moulting in insects.
  11. Write an essay on neuro-endocrine integration in vertebrates.
- V. Answer any **TWO** of the following. **(2x5=10)**
12. Comment on biosynthesis of steroid hormones *de novo*.
  13. Explain hormone receptors.
  14. Write notes on steroid and protein hormones.
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