

**20P315**

(Pages: 1)

Name: .....

Reg. No: .....

**THIRD SEMESTER M.Sc. DEGREE EXAMINATION, NOVEMBER 2021**

(CBCSS-PG)

(Regular/Supplementary/Improvement)

**CC19P ZO3 C08 - DEVELOPMENTAL BIOLOGY AND ENDOCRINOLOGY**

(Zoology)

(2019 Admission onwards)

Time: Three Hours

Maximum: 30 Weightage

I. Answer any **four** questions.

1. What are second messengers of hormone action?
2. Comment on nieuwkoop center.
3. Explain free radical theory of aging.
4. Define the role of retinoic acid as teratogen.
5. What are eicosanoids?
6. Comment on capacitation.
7. Explain amphimixis.

**(4 × 2 = 8 Weightage)**

II. Answer any **four** questions.

8. Describe the process of vulval induction in *Caenorhabditis elegans*.
9. Give an account on hormonal control of menstrual cycle.
10. Briefly explain hedgehog proteins.
11. Give a brief account on structure and hormone of pituitary gland.
12. Comment on general classes of chemical messengers.
13. Define RTK pathway and its role in development.
14. Write a short note on any two teratogenic agents and their impact on development.

**(4 × 3 = 12 Weightage)**

III. Answer any **two** questions.

15. Write an essay on tetrapod limb development.
16. Explain the process of gastrulation in amphibians.
17. Briefly explain the role of hormones in pregnancy, lactation and parturition.
18. Write an essay on hormone receptors and transducers.

**(2 × 5 = 10 Weightage)**

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