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(Pages : 2)

Name.....

Reg. No.....

THIRD SEMESTER M.Sc. DEGREE (REGULAR/SUPPLEMENTARY)
EXAMINATION, NOVEMBER 2024

(CBCSS)

Zoology

ZOL 3C 08—DEVELOPMENTAL BIOLOGY AND ENDOCRINOLOGY

(2019 Admission onwards)

Time : Three Hours

Maximum : 30 Weightage

I. Answer any *four* of the following. Short Answer Type Questions. Weightage 2 :

- 1 How do cytoplasmic determinants affect cell differentiation.
- 2 Write the induction of the early limb bud : fibroblast growth factors.
- 3 What is epithelial-mesenchymal interaction ?
- 4 Write a short note on hormonal control of amphibian metamorphosis.
- 5 Write the fundamental principle of evolutionary changes.
- 6 What are Transducers ?
- 7 What is the role of estradiol in the male reproductive system ?

(4 × 2 = 8 weightage)

II. Answer any *four* of the following. Short Essay Type Questions. Weightage 3 :

- 8 Describe the prevention of polyspermy.
- 9 Explain the progressive determination of the amphibian axes.
- 10 Describe the post-transcriptional control of gene expression.
- 11 Describe the study of morphallactic regeneration in hydras.
- 12 What is Heterochrony ? Write their evolutionary novelties.
- 13 Write the pathway of the receptor signal transduction.
- 14 Write the endocrine regulation of testicular function.

(4 × 3 = 12 weightage)

Turn over

III. Answer any *two* of the following. Long Essay Type Questions. Weightage 5:

- 15 Write brief mechanisms of early amphibian development.
- 16 Write a brief note on differential gene transcription.
- 17 What are Neurotransmitters? Write their types and roles.
- 18 Write the pathophysiology and clinical significance of the male reproductive system.

(2 × 5 = 10 weightage)

Time :

I. /