

C 4683

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Name.....

Reg. No.....

**SECOND SEMESTER M.Sc. DEGREE EXAMINATION, JUNE 2016**

(CUCSS)

Zoology

**ZO 2C T06—DEVELOPMENTAL BIOLOGY AND ENDOCRINOLOGY**

Time : Three Hours

Maximum : 36 Weightage

**I. Answer all *fourteen* questions :**

- 1 Nieukoop centre.
- 2 Y-organ.
- 3 Neurotransmitter.
- 4 Regenerative field.
- 5 Metaplasia.
- 6 Epimorphosis.
- 7 Paracrine factors.
- 8 Fast block to polyspermy.
- 9 Bldin.
- 10 Bicoid gradient.
- 11 Homeotic genes.
- 12 Retinoic acid as teratogenic agent.
- 13 Polyphenism.
- 14 Progesterone.

(14 × 1 = 14 weightage)

**II. Answer any *seven* questions :**

- 15 Explain the second messengers of hormonal action.
- 16 Describe the maternal effect genes.

**Turn over**



- 17 Explain the causes of ageing.
- 18 Explain the hormonal regulation of sexual phenotype.
- 19 Describe anterior posterior patterning in Amphibians.
- 20 Discuss about genetic teratogens.
- 21 Explain the role of Y-chromosome during maturation division.
- 22 Explain the cellular changes that take place during growth phase in oogenesis.
- 23 Describe the role of hypothalamus in the regulation of hypophyseal hormones.
- 24 Explain the role of gases as neural messengers.

(7 × 2 = 14 weightage)

III. Answer any *two* questions :

- 25 Describe metamorphosis in insects and its hormonal control.
- 26 Write an account on epithelial-mesenchymal interactions.
- 27 Describe the types of hormone receptors and explain the regulation receptor number and receptor activation.
- 28 Describe the synthesis, chemistry and metabolism of androgens and its physiological roles.

(2 × 4 = 8 weightage)