

C 31307

(Pages : 2)

Name.....

Reg. No.....

THIRD SEMESTER M.Sc. DEGREE EXAMINATION, DECEMBER 2017

(CUCSS)

Zoology

Z 03 CT 08—DEVELOPMENTAL BIOLOGY AND ENDOCRINOLOGY

(2016 Admissions)

Time : Three Hours

Maximum : 36 Weightage

Part A

I. Answer all *fourteen* questions :

1. Morphogenetic gradients
2. What is *Corpus luteum* ?
3. Amphimixis.
4. Acrosome reaction
5. Primitive streak
6. What is radial cleavage ? Give an example.
7. Dosage compensation.
8. Importance of ZPA in chick limb development.
9. Sperm-egg recognition in sea urchin.
10. Capacitation.
11. Activation of ovum.
12. Steroid Hormones.
13. Prostaglandins.
14. Explain the function of calcitonin and parathormone.

(14 × 1 = 14 weightage)

Part B

II. Answer any *seven* of the following :

15. Effects of pesticides in development.
16. Explain the signal transduction pathway of Epinephrin.
17. Applications of Embryonic stem cells.

Turn over

18. Hormonal control of behaviour.
19. Differentiate between, instructive and permissive interaction.
20. Explain oogenesis in mammals.
21. Hormonal factors in pregnancy, parturition and lactation.
22. Testicular Dysgenesis Syndrome.
23. Write an account on Renin-Angiotensin system.
24. Anterior-posterior patterning in *Drosophila melanogaster*.

(7 × 2 = 14 weightage)

Part C

III. Answer any *two* of the following :

25. Write notes on differential gene transcription.
26. Write notes on the biology of senescence.
27. Explain spermatogenesis and oogenesis in mammals.
28. Write notes on anatomy and pathophysiology of adrenal gland.

(2 × 4 = 8 weightage)