

(204ZOO17)

M.Sc. DEGREE EXAMINATION, APRIL 2018

SECOND SEMESTER

Branch - Zoology

DEVELOPMENTAL BIOLOGY

(New Syllabus for Batch 2017)

Time : 3 Hours

Max. Marks : 70

I. Answer any FIVE of the following :

(5 × 4 = 20)

1. Embryonic stem cells.
2. Leydig cells.
3. Cleavage.
4. Fate maps.
5. Organogenesis.
6. Regeneration.
7. Morphogenesis.
8. Aging.

II. Answer FOUR of the following :

(4 × 12.5 = 50)

9. (a) Describe the endocrine regulation of spermatogenesis and vitellogenesis.

Or

- (b) What is fertilization? Explain the cell surface molecules in sperm egg recognition and the molecular events of post fertilization.

10. (a) Elaborate the cleavage, blastula and gastrulation in different animals.

Or

- (b) Write notes on :

- (i) Development gradients in Hydra
- (ii) Germ layers formation.

[P.T.O]

11. (a) Describe the axis and pattern formation in amphibia and chick.

Or

(b) Write an essay on the hormonal regulation of metamorphosis in insects.

12. (a) Describe the genetic control of longevity and age related diseases.

Or

(b) Explain the apoptosis in metamorphosis and morphogenesis.

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