

(6 pages)

Reg. No. :

Code No. : 7903

Sub. Code : PZOM 13

M.Sc. (CBCS) DEGREE EXAMINATION,
NOVEMBER 2019.

First Semester

Zoology — Core

DEVELOPMENTAL BIOLOGY

(For those who joined in July 2017 onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer.

1. The organism develops in a stepwise fashion from an unorganized state is called
(a) Epigenesis (b) Mesogenesis
(c) Spermiogenesis (d) Oogenesis
2. Sertoli cells are otherwise called as _____.
(a) Nurse cells (b) Plasma cells
(c) Parietal cells (d) Germinal cells

3. The process of formation of primary organ rudiment is called _____.
(a) Tubulation
(b) Neurulation
(c) Elongation
(d) Organogenesis
4. If cleavages cannot divide embryo completely, resulting cleavages are called as _____.
(a) Holoblastic cleavages
(b) Vertical cleavages
(c) Horizontal cleavages
(d) Meroblastic cleavages
5. Gonads are develops from embryonic
(a) Ectoderm (b) Endoderm
(c) Mesoderm (d) All of these
6. The respiratory function of embryo is performed by _____.
(a) Chorion (b) Amnion
(c) Allantois (d) Yolk sac

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7. Which hormone controls the process of metamorphosis in frog?

- (a) Thyroxin
- (b) Adrenalin
- (c) Leutinizing hormone
- (d) Prolactine

8. Fertilizins are emitted by

- (a) Immature eggs
- (b) Mature eggs
- (c) Sperms
- (d) Polar bodies

9. Prenatal toxicity characterized by structural or functional defects in the developing embryo or fetus _____

- (a) Teratogenesis
- (b) Parthenogenesis
- (c) Organizer
- (d) Inductor

10. An animal in the earliest stages of its development in the egg _____.

- (a) Embryo
- (b) Foetus
- (c) Organ
- (d) Tissues

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PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (a) Describe the Baer's Law.

Or

(b) Write short notes on Germplasm theory.

12. (a) Explain the planes of cleavage.

Or

(b) Short account of fate of seaurchin.

13. (a) Write short notes on development of Brain in vertebrate.

Or

(b) Describe the development of Eye in vertebrate.

14. (a) List out the morphological changes in amphibian metamorphosis.

Or

(b) Explain the factors controlling molting and metamorphosis.

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15. (a) Write short notes on Embryonic induction.

Or

- (b) Explain the types of differentiation.

PART C — (5 × 8 = 40 marks)

Answer ALL questions choosing Either (a) or (b)

Each answer should not exceed 600 words.

16. (a) Discuss – Spermatogenesis.

Or

- (b) Write an essay on Oogenesis.

17. (a) What is cleavage? Explain the role of yolk in cleavage.

Or

- (b) Explain in brief early development of sea urchin.

18. (a) Write an essay on blastulation and gastrulation in Mammals.

Or

- (b) Enumerate the physiological changes in frog during metamorphosis.

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19. (a) Discuss the development of Kidney.

Or

- (b) Write an essay on neuro endocrine control of insect metamorphosis.

20. (a) Discuss about the Teratogenesis.

Or

- (b) Give an account on Theories of organizer.
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