

(6 Pages)

Reg. No. :

Code No. : 30529 E Sub. Code : AMZO 31

B.Sc. (CBCS) DEGREE EXAMINATION,
NOVEMBER 2021.

Third Semester

Zoology — Main

DEVELOPMENTAL ZOOLOGY

(For those who joined in July 2020 onwards)

Time : Three hours

Maximum : 75 marks

PART A — ($10 \times 1 = 10$ marks)

Answer ALL questions.

Choose the correct answer :

1. The transformation of the spermatid into spermatozoon is called
 - (a) Spermiogenesis
 - (b) Gametogenesis
 - (c) Spermatogenesis
 - (d) Vitellogenesis

2. _____ is the union of spermatozoon and egg resulting in the formation of zygote.
- (a) Evagination (b) Fertilization
(c) Invagination (d) Delamination
3. The mitotic division of egg resulting in the production of blastomeres are called
- (a) Blastula (b) Gastrula
(c) Cleavage (d) Fate map
4. The first test tube baby was
- (a) Aristotle (b) Watson
(c) Edward Jenner (d) Louise Brown
5. An embryonic tissue which organizes the entire process of development is
- (a) Inductor (b) Competence
(c) Organizer (d) All of the above
6. An area which is committed to develop into a particular organ is called
- (a) Organizer (b) Morphogenetic field
(c) Gradient (d) Organogenesis

7. Which of the following is bringing metamorphosis in amphibians?
- (a) Thyroxine (b) Ecdysone
(c) Prolactin (d) Brain hormone
8. The deciduate placenta is found in
- (a) Horse (b) Man
(c) Pig (d) Cat
9. Which of the following animal exhibit super regeneration?
- (a) Frog (b) Hydra
(c) Planaria (d) Crab
10. Wolffian regeneration was found in
- (a) Birds (b) Mammals
(c) Protozoans (d) Amphibians

PART B — ($5 \times 5 = 25$ marks)

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

Each answer should not exceed 250 words.

11. (a) Enlist the scope of developmental zoology.

Or

- (b) Briefly explain the physical factors involved in fertilization.

12. (a) Give a brief account on fate map of chick.

Or

- (b) Write a short note on artificial insemination.

13. (a) Explain the development of brain in chick.

Or

- (b) Elucidate the organizer with experimental evidence.

14. (a) Clarify the hormonal control of amphibian metamorphosis.

Or

- (b) Highlight the physiology of placenta in Mammals.

15. (a) Write an account on regeneration in planaria.

Or

- (b) List out the contraceptive devices used for birth control.

PART C — ($5 \times 8 = 40$ marks)

Answer ALL questions choosing either (a) or (b),
Each answer should not exceed 600 words.

16. (a) Give a detailed account on Oogenesis.

Or

- (b) Analyse the significance of parthenogenesis.

17. (a) Describe the salient features of 48 hours chick embryo.

Or

- (b) Write an essay on test tube babies and its advantages.

18. (a) Highlight the development of heart in chick.

Or

- (b) Elaborate the gradient theory with experimental evidences.

19. (a) Discuss the extra embryonic membranes in Chick.

Or

- (b) What is placenta? Classify the placenta based on the type of foetal membranes involved.

20. (a) Write an elaborate account on types of regeneration.

Or

- (b) Explain in detail about hormonal method of birth control.
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