(Pages : 3) **R – 1300**

Reg. No. : .....

Name : .....

Sixth Semester B.Sc. Degree Examination, April 2023

First Degree Programme under CBCSS

Zoology

Core Course IX

ZO 1642 : DEVELOPMENTAL BIOLOGY AND EXPERIMENTAL EMBRYOLOGY

(2019 Admission Onwards)

Time : 3 Hours Max. Marks : 80

I. Answer the following questions. In **one** or **two** sentences.

1. What is ontogeny?
2. Who proposed germ plasm theory?
3. What is vas deferens?
4. Define spermiogenesis.
5. What is acrosome?
6. What is the lytoky?
7. What is periblastula?
8. Comment on mesolecithal eggs.
9. What is discoidal placenta?
10. What is superovulation?

(10 × 1 = 10 Marks)

P.T.O.

II. Answer any **eight** of the following. Not to exceed **one** paragraph. Each carries **2** marks.

11. Briefly describe the structure of a graffian follicle.

12. What is epigenesis?

13. What is parthenogenesis?

14. Comment on biogenetic law.

15. Briefly describe the features of a centolecithal egg.

16. Comment on menarche.

17. What is capacitation?

18. What is bilateral cleavage?

19. Comment on coeloblastula.

20. What are morphogenetic movements?

21. Give a brief account on delamination.

22. Comment on Hensens node.

(8 × 2 = 16 Marks)

III. Answer any **six** of the following. Not to exceed **120** words. Each carries **4** marks.

23. What are the various types of eggs?

24. Differentiate between determinate and indeterminate cleavage.

25. Give an account on fate maps.

26. What is emboly?

27. Give an account on homeotic genes.

28. Give the definition and substantiate the significance of placentation.

29. What are terratogenic agents?

30. Briefly describe the significance of primitive streak.

31. Comment on extra embryonic membranes of chick .

(6 × 4 = 24 Marks)

IV. Answer any **two** of the following. Each carries **15** marks.

32. Write an essay on spermatogenesis.

33. Give an account on physiological and biochemical aspects of fertilisation.

34. Describe the various types of blastulation.

35. What is cell differentiation? Elaborate the potency of embryonic cells.

(2 × 15 = 30 Marks)