Reg. No. : .....

Name : .....

Sixth Semester B.Sc. Degree Examination, March 2020

First Degree Programme Under CBCSS

Core Course IX

ZO1641-DEVELOPMENTAL BIOLOGY AND EXPERIMENTAL EMBRYOLOGY

(2015 Admission Onwards)

Time : 3 Hours Max. Marks : 80

I. Answer the following questions (In **one** or **two** sentences. One mark each)

1. Discoblastula.
2. Homeotic genes.
3. Fate map.
4. Arrhenotoky.
5. Alpha-foeto protein.
6. Notogenes.
7. Epiblast.
8. Hox genes.

9. Embryonic induction.

10. Capacitation.

(10 × 1 = 10 Marks)

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

11. Write down the significance of egg envelops.

12. List the steps in the construction of fate maps.

13. Write the functions of amnion in chick development.

14. What is Primitive groove? Mention its function.

15. What is stem cell research?

16. Give notes on Thelytoky

17. Compare reproductive and therapeutic cloning.

18. Define neural crest.

19. What are mosaic and regulatory eggs?

20. Name the types of placenta based on mode of implantation.

21. What is Amniocentesis?

22. Define spawning.

(8 × 2 = 16 Marks)

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

23. Write on stem cell therapy.

24. Explain the process of Gastrulation in Amphioxus.

25. Give a detailed account on Spemann's constriction experiments.

26. Classify placenta based on distribution of chorionic villi.

27. Describe the mechanisms to block polyembryony.

28. Write on artificial parthenogenesis.

29. Explain different types of cleavage.

30. Give an account of cortical reactions.

31. Give the features of 33 hour chick embryo.

(6 × 4 = 24 Marks)

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

32. Elaborate the development of extra embryonic membranes in chick.

33. Describe the structure of egg. Explain the process of formation of egg.

34. Explain the different types of cellular movements during Gastrulation.

35. Write on different types of Placenta.

(2 × 15 = 30 Marks)
