ST. SAVIO'S COLLEGE TRIVANDRUM

(Pages : 3)

R – 1299

Reg. No. : .....

Name : .....

Sixth Semester B.Sc. Degree Examination, April 2023

First Degree Programme under CBCSS

Zoology

Core Course IX

ZO 1641 : DEVELOPMENTAL BIOLOGY AND EXPERIMENTAL EMBRYOLOGY

(2015–2018 Admission)

Time : 3 Hours

Max. Marks : 80

SECTION – A

Answer **all** questions in **one** or **two** sentences. Each question carries **1** mark.

1. Theory of Epigenesis
2. Centrolecithal egg
3. Holoblastic cleavage
4. Epiboly
5. Amphimixis
6. Unipotent cells
7. In vitro fertilization

P.T.O.

8. Cledoic egg

9. Teratogens

10. Primary egg membranes

(10 × 1 = 10 Marks)

SECTION – B

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

11. Distinguish between pleuripotency and totipotency.

12. What is spermiogenesis?

13. Distinguish between determination and differentiation.

14. What is Hemo-chorial placenta?

15. Draw the fate map of frog.

16. What are test tube babies?

17. What is Organizer? Give examples.

18. What is cell lineage?

19. Give an account of theory of Preformation.

20. Explain the role of progesterone during pregnancy.

21. What is primitive streak? Sketch and label.

22. What are cytoplasmic determinants?

(8 × 2 = 16 Marks)

SECTION – C

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

23. With the help of a diagram explain the structure of Graafian follicle.

24. Classify eggs based on the amount of yolk.

25. What is blastulation ? Give an account of different kinds of blastulae.

26. Give an account of extra embryonic membranes in chick.

27. What are stem cells? Briefly describe about different types of stem cells.

28. Classify placenta based on the distribution of chorionic villi.

29. Explain the salient features of 24 hours chick embryo.

30. Give an account of cleavage and blastulation in amphioxus.

31. Explain the physiological and biochemical changes during and after fertilization.

(6 × 4 = 24 Marks)

SECTION – D

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

32. Write an Essay on Placentation in mammals.

33. Describe the different types of parthenogenesis. Add a note on its significance.

34. What is fate map? Explain various techniques used in the construction of fate map.

35. Describe different patterns and types of cleavage.

(2 × 15 = 30 Marks)
