Avinashilingam Institute for Home Science and Higher Education for Women

(Deemed to be University under Category 'A' by MHRD, Estd. u/s 3 of UGC Act 1956)
Re-accredited with 'A+' Grade by NAAC. Recognised by UGC Under Section 12B
Coimbatore - 641 043, Tamil Nadu, India

Bachelor's Degree Examination – July 2020
VI Semester

Class : III UG **Time : 2 Hours**
Major : Zoology **Max. Marks: 50**

15BZOC24 Developmental Biology

Part A **10 x 1 = 10**
Choose the Correct Answer

1. Meiosis produces four cells termed as
   a. spermatids b. neurons
   c. oocytes d. myocytes

2. Eggs containing higher quantities of yolk are called as _____ eggs.
   a. microlecithal b. mesolecithal
   c. macrolecithal d. alecithal

3. The process of three germ layer formation is called
   a.fertilization b. organogenesis
   c. gastrulation d. cleavage

4. Gray crescent is present in the _____ of the frog.
   a. fertilized egg b. unfertilized egg
   c. sperm d. zygote

5. During gastrulation in frog, the prospective nervous system mainly expands due to
   a. involution b. invagination
   c. epiboly d. delamination

6. _____ is the first indication of gastrulation in frog.
   a. Formation of germ ring b. Formation of grey crescent
   c. Formation of germ layers d. Formation of archenteron

7. The axial skeleton is derived from
   a. endoterm b. mesoterm
   c. ectoterm d. none of the above

8. Foetal membranes are found in
   a. fishes b. amphibians
   c. cyclostomes d. mammals

9. Gestational age, takes the beginning of the last menstrual period as the
   a. zero point b. fertilization point
   c. embryonic point d. cleavage point

10. Human chorionic gonadotrophin is produced by _____after implantation.
   a. uterus b. mammary gland
   c. placenta d. zygote

Part - B **3 x 6 = 18**

Answer any three questions

Each answer should not exceed 400 words or two pages

11. Give an account on the scope of embryology.

12. Explain the steps of oogenesis.

13. Define cleavage. Explain the significance of cleavage.

14. What is fate map? Explain fate map of frog.

15. Summarize the special features of gastrulation.

16. Explain the process of gastrulation in frog.

17. Exemplify the development of eye.

18. Discuss the development of heart.

19. Comment on the human embryonic development during first trimester.

20. Describe in detail about the functions of placenta.

Part C **2 x 11 =22**

Answer any two questions

Each answer should not exceed 800 words or four pages

21. Give an elaborate account on spermatogenesis.

22. Explain the types of eggs. Give notes on egg membranes.

23. Elucidate the mechanism and significance of fertilization.

24. Describe in detail about the types and patterns of cleavage.

25. Describe in detail about morphogenetic movement.

26. Narrate the gastrulation process in chick.

27. Discuss in detail about the development of brain.

28. Demonstrate the development of alimentary canal and its associated glands.

29. Illustrate the causes and risks of ectopic pregnancy.

30. Explain the different types of placenta in mammals.

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