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**DATE: 29-04-2019**

**ST. JOSEPH’S COLLEGE (AUTONOMOUS), BANGALORE-27**

**B.Sc., ZOOLOGY – VI SEMESTER**

**SEMESTER EXAMINATION: APRIL 2019**

**ZO 6215 - Developmental Biology and Evolution**

Time-2 ½ hrs Max Marks-70

**Supplementary candidates only.**

***This paper contains two printed pages and three parts***

**PART A**

**I. Answer the following questions. Each question carries 1 mark 1X15=15**

1. Epigenetic law was proposed by\_\_\_\_\_\_\_\_\_\_.

a) Spallanzani b) Haeckel c) Von Baer d) Wolff

2. ‘Ontogeny recapitulates phylogeny’ was the basis of \_\_\_\_\_\_\_\_\_ law.

a) Von Baer’s b) Biogenetic c) Epigenetic d) All of these

3. \_\_\_\_\_\_\_\_\_\_ keeps the blastodisc in its position when egg is rotated.

a) Albumin b) Chalazae c) Yolk d) Air space

4. \_\_\_\_\_\_\_\_\_\_ type of blastula is seen in Amphioxus.

a) Central b) Eccentric c) Coeloblastula d) None of these

5. The fate of blastopore in deuterostomes is to develop into \_\_\_\_\_\_\_\_\_\_.

a) Mouth b) Anus c) Gut d) None of these

6. The inward movement of cells during gastrulation is called as \_\_\_\_\_\_\_\_\_\_.

a) Invagination b) Epiboly c) Convergence d) Emboly

7. The epithelial lining of alimentary canal is formed from \_\_\_\_\_\_\_\_\_\_.

a) Ectoderm b) Mesoderm c) Endoderm d) None of these

8. \_\_\_\_\_\_\_\_\_ is the placental hormone helpful in detection during early pregnancy tests.

a) LH b) hCT c) hCG d) Progesterone

9. Concentration of \_\_\_\_\_\_\_\_\_\_\_ in the maternal blood rises to maximum towards the end of gestation.

a) Progesterone b) Estrogen c) FSH d) hACTH

10. \_\_\_\_\_\_\_\_\_\_\_ is formed from extraembryonic splanchnopleure.

a) Amnion b) Chorion c) Allantois d) All of these

11. ‘Theory of use and disuse’ is explained in detail in \_\_\_\_\_\_\_\_\_\_ book.

a) Origin of species b) Philosophic zoologies c) The selfish gene d) Voyage of the beagle

12. Reappearance of ancestral features in descendants is called as \_\_\_\_\_\_\_\_\_\_\_.

a) Gene flow b) Atavism c) Genetic drift d) Inbreeding

13. \_\_\_\_\_\_\_\_\_ is an example of speciation.

a) Galapagos finches b) Hawaiian fruit flies c) Both a and b d) None of these

14. \_\_\_\_\_\_\_\_\_\_\_ is a connecting link between fishes and amphibians.

a) Peripatus b) Protopterus c) Petromyzon d) Neopilina

15. \_\_\_\_\_\_\_\_\_\_\_ are the closest kin of human beings.

a) Tarsiers b) Apes c) Lorises d) Lemurs

**PART B**

**II. Answer any five questions. Each one carries 5 marks 5X5=25**

16. Comment on blastulation in chick with neat diagrams.

17. What are the different types of cell movements involved in gastrulation in amphioxus?

18. With a suitable sketch, explain syndesmochorial placenta.

19. Comment on different types of fossils and their importance.

20. Differentiate between hyracotherium and equus.

21. What are the salient features of Cro-magnon man?

22. Write a short note on continental drift.

**PART C**

**III. Answer any three questions. Each question carries 10 marks 3X10=30**

23. With the help of suitable sketches, compare the cleavage patterns of frog and chick.

24. ‘The dorsal lip of blastopore organizes the secondary axis formation in amphibian development’. Substantiate the statement using transplantation experiments.

25. With diagrams elaborate the process of fertilization.

26. What are the elementary forces disrupting the genetic equilibrium in a population? Explain.

27. Give an account of the geological time scale with special emphasis to fauna of each period.

**ZO 6215\_A\_19**