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**2-06-2017**

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

B.Sc. ZOOLOGY - VI SEMESTER

**SPECIAL SUPPLEMENTARY EXAMINATION: APRIL 2018**

ZO 6212: Developmental Biology and Evolution.

Time: 3hrs Max.Marks:100

ATTACH THE QUESTION PAPER WITH THE ANSWER SCRIPT

**Note: Part I:** Indicate the correct answer word. All the questions should be answered together in the first page of your answer booklet.Indicate the question numbers clearly. Draw suitable diagrams wherever necessary

*This question paper has 3 printed pages and 3 parts*

**Part A**

**I. ANSWER THE FOLLOWING: 1 X 20=20**

1. The pattern of cleavage found in Nereis is \_\_\_\_\_\_\_\_.
2. Radial b. symmetrical c. spiral d. all the three.
3. Preformation theory speaks about the rearrangement of the cytoplasmic granules in the formation of the embryo. **True / False.**
4. The first cleavage in chordates are generally
5. Horizontal b. synchronous vertical c. vertical d. meridional.
6. The significance of blastocoelic fluid is
7. Nutrition b. maintains shape c. both a & b d. maintains moisture
8. Involution in gastrulation is shown by
9. Micromeres at the ventral lip b. macromeres at the ventral lip
10. Micromeres at the dorsal lip d. macromeres at the dorsal lip
11. Calcium for the development of the endoskeleton in a cledoic egg is derived from
12. Albumen b. yolk c. egg shell d. both b & c
13. Amphioxus gastrula has \_\_\_\_\_\_layers of blastoderm, but \_\_\_\_\_ types of germinal cells.
14. 4& 2 b. 2 & 3 c. 3 & 3 d. 1 & 3
15. Half life of **C14** is\_\_\_\_\_ years.
16. 5566 b. 5658 c. 5568 d. 5865
17. \_\_\_\_\_\_\_\_\_\_ is a mammal with homodont dentition.
18. Pangolin b. horse c. Dolphin d. seal
19. There are \_\_\_ numbers of chromosomes in mule.
20. 63 b. 64 c. 62 d. 65
21. Which one of the following aortic arch gives rise to the formation of pulmonary artery
22. 3rd b. 4th c. 5th d. 6th
23. Germ plasm theory was proposed by
24. Lamarck b. Dobzhansky c. Weismann d. Darwin.

ZO\_6212\_15\_A

1. Fertilizin is associated with
2. Sperm b. Egg c. Zygote d, spermatogonia.
3. 1st period of Paleozoic era is Precambrian. **True / False**.
4. The foetal nitrogenous wastes are stored
5. Chorion b. allantois c. amnion b. both b & c
6. An example for primary organizer is chordamesoderm. **True / False**
7. Neural ectoderm is a \_\_\_\_\_\_\_\_\_\_ inductor.
8. Head b. trunk c. tail d. all the three.
9. Yolk sac placenta is a feature of
10. Reptiles b. Birds c. Prototherians d. all the three.
11. The release of the ovum from the follicle is associated with
12. Decrease in FSH level b. Increase in the LH level
13. Increase in Progesterone level d. both a & b
14. The nearest ancestor of the modern man
15. Propliopithecus b. Cro-Magnon c. Australopithecus d. Ramapithecus

**Part B**

**II. Answer any EIGHT of the following: 5 x 8 = 40**

21. Explain Von Baer’s law with a suitable evidence

22. Classify eggs based on the quantity and distribution of yolk with an example for each.

23.Describe the blastula of Frog with the aid of a neat labeled diagram.

24. Explain neurulation in Frog

25. Describe the morphological types of placenta with suitable examples

26. Explain Lamarckism with suitable examples

27. Write briefly on Mesozoic era and add a note on major fauna of each period.

28. What are fossils? Explain the different types of fossils.

29. Explain how embryological studies support organic evolution

30. What is continental Drift? Explain with an example.

**Part C**

**III. Answer any FOUR of the following: 4 x 10 = 40**

31. What is fertilization? Explain the process of fertilization

32. Give a brief account on formation and function of Amnion and Chorion in Chick.

33. What is an organizer? Explain transplantation experiments of Spemann and Mangold

34. Mention the role of homologous and analogous organs in evidence of evolution

35. Describe the evolutionary changes in Hyracotherium ,Mesohippus and Merychippus.

36. Write briefly on evolution of modern man.