

STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI 600 086

(For candidates admitted during the academic year 2011 – 2012)

SUBJECT CODE: 11ZL/MC/DB64

B. Sc. DEGREE EXAMINATION APRIL 2014

**BRANCH VI.A. ADVANCED ZOOLOGY & BIOTECHNOLOGY
SIXTH SEMESTER**

**COURSE : MAJOR CORE
PAPER : DEVELOPMENTAL BIOLOGY
TIME : 3 HOURS**

MAX. MARKS: 100

SECTION – A

ANSWER ALL QUESTIONS :

(10 X 3 = 30)

1. Write a note on Epigenesis and Pangenesis.
2. Define Regeneration and list the different types.
3. Expand the following:
 - 1) JH
 - 2) IVF
 - 3) FSH.
4. What are Stem cells? Give any two examples.
5. Draw a neat labeled diagram of the fate map of amphibian blastula.
6. What are the following
 - 1) Blastula
 - 2) Blastodisc
 - 3) Blastocyst
7. Classify the different types of eggs.
8. What is Surrogacy?
9. What is the significance of the gradient theory in the study of development?
10. Distinguish between primary and secondary organ rudiments.

SECTION – B

ANSWER ANY FIVE QUESTIONS :

(5 X 6 = 30)

11. Explain briefly the hormonal regulation of Insect metamorphosis.
12. Explain extra embryonic membranes with reference to chick development.
13. Discuss the influence of yolk on the types of cleavage.
14. Trace the development of heart in Frog.
15. Describe the various experiments of nuclear transplantation techniques.
16. What is parthenogenesis? Explain the different types.
17. What are the different types of morphogenetic movement observed in chordate embryos?

SECTION – C**ANSWER ANY TWO QUESTIONS :****(2 X 20 = 40)**

18. Give a detailed account of the process of Spermatogenesis. Draw a neat labeled diagram of a typical sperm.
19. Explain the process of gastrulation in frog and Amphioxus and highlight the differences.
20. Describe the development and the structure of eye in Frog.
21. Classify and describe the various types of placenta with examples. Add a note on its functions.
