

**STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI 600 086**  
(For candidates admitted during the academic year 2011 – 2012 & thereafter)

**SUBJECT CODE: 11ZL/MC/DB64**

**B. Sc. DEGREE EXAMINATION APRIL 2015**  
**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. Explain
  - a) Biogenetic law
  - b) Metamorphosis
  - c) Embryology
2. Comment on the following
  - a) Pluripotent
  - b) Stem cell therapy
  - c) Parthenogenesis
3. Expand the following
  - a) IVF
  - b) LH
  - c) ICSH
4. Draw a neat labeled diagram of a sperm.
5. Match the following:

a) Double gradient theory	-	menopause
b) Accessory cells	-	Runnstrom and Horstadius
c) Epimorphosis	-	Holoblastic and equal
d) Last mensus	-	Repair due to addition of parts
e) Cleavage of amphioxus	-	Robert Edward and Patric Stoptoe
f) Scientist who perfected test tube baby technique	-	Nurse cell and follicle cell
6. Differentiate metamorphosis and regeneration.
7. Define blastula.
8. What is primary organizer?
9. Gamete intra- fallopian transfer (GIFT).
10. Significance of egg membrane.

**SECTION – B**

**ANSWER ANY FIVE QUESTIONS :**

**(5 X 6 = 30)**

11. Explain how differentiation is controlled at the level of transcription.
12. Comment on fatemaps and highlight their significance.
13. Explain nuclear transplantation experiments.
14. Explain the development of forebrain in frog.
15. Write a short note on the various morphogenetic movements.
16. What is regeneration? Elaborate the different types.
17. Discuss the ethical issues that arise out of surrogacy.

**SECTION – C**

**ANSWER ANY TWO QUESTIONS :**

**(2 X 20 = 40)**

18. Explain with neat diagram the process of oogenesis.
19. Define cleavage. Mention the types and explain the process of cleavage in frog.
20. Explain how eye is developed in frog.
21. What is placenta and describe its various types and its function.

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