

**STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI 600 086**  
**(For candidates admitted during the academic year 2008 – 2009)**

**SUBJECT CODE: ZL/MC/DP64**

**B. Sc. DEGREE EXAMINATION APRIL 2011**  
**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 the following
  - a. Epiboly
  - b. Morphallaxis
  - c. Telolecithal
2. Comment on the following
  - a. Blastula
  - b. spermatids
  - c. Ecdysone
3. Expand the following
  - a. JH
  - b. LH
  - c. FSH
4. Draw a neat labeled diagram of hen's egg
5. Match the following
  - a. Biogenetic law
  - b. Neural induction
  - c. Determinate cleavage
  - d. Indeterminate cleavage
  - e. Allantois
  - f. Diffuse placenta
  - mosaic development
  - regulative development
  - Haeckel
  - removal of waste
  - pig
  - Spemann
6. Comment on meroblastic cleavage
7. Write a note on Graafian follicle
8. Define Retrogressive metamorphosis
9. Give any 3 applications of Stem cell
10. What is Embryo transfer?

**SECTION – B****ANSWER ANY FIVE QUESTIONS :****(5 X 6 = 30)**

11. Briefly explain metamorphosis in insects.
12. Write a note on extra-embryonic membranes.
13. Discuss various morphogenetic movements that takes place during gastrulation in Chick.
14. What is a Fate map? Explain its significance.
15. Explain various patterns of cleavage.
16. What is parthenogenesis? Explain its types.
17. Describe the development of frog's brain.

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

18. Give an account on Gametogenesis.
19. Explain in detail the mechanism of Regeneration in Amphibians. Add a note on its types.
20. Write a detailed account on Placentation in Mammals.
21. What is *in vitro* fertilization? Explain the ethical and legal issues.

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