

BOWEN UNIVERSITY, IWO
DEPARTMENT OF BIOLOGICAL SCIENCES

2010/2011 FIRST SEMESTER EXAMINATION

ZLY 409: EMBRYOLOGY
THEORY

Answer any three questions.

Time: 2 hrs 15 mins

1. (a) Define fertilization and discuss how it is accomplished in chordates.
(b) In terms of metabolism, discuss the features possessed by the sperm and egg that makes them capable of carrying out fertilization.
(25 Marks)

2. (a) Discuss the process of cleavage and its product in a **named** chordate.
(b) Explain the importance of cleavage and the influence of yolk on cleavage patterns.
(25 Marks)

3. (a) Discuss using diagrams where appropriate, gastrulation in *Amphioxus*.
(b) Describe the types of extra-embryonic membranes you know
(25 Marks)

4. (a) Discuss in detail, the process of neurulation in a named chordate.
(b) How is the process described above important in embryonic development?
(25 Marks)

5. (a) Discuss in brief, the process of Oogenesis
(b) Compare and contrast, the process of gametogenesis in male and female animals
(25 Marks)