

**JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY**

**SCHOOL OF BIOLOGICAL AND PHYSICAL SCIENCES**

**DEPARTMENT OF BIOLOGICAL SCIENCES**

**FIRST YEAR SECOND SEMESTER EXAMS MAY-AUGUST, 2014**

**B (SCI) & BED (SCIENCE)**

**SZL 301: Developmental Biology**

**2 hours**

**Date.....**

**Section A – Answer All Questions (30 marks)**

1. Define developmental biology, and mention one important reason why developmental biology is important especially to humans. [3 marks]
2. Distinguish between morphogenesis and embryogenesis. [3 marks]
3. Briefly explain the cleavage process. [3 marks]
4. Name two divisions of Gametogenesis. [3 marks]
5. Outline two functions of Sertoli cells. [3 marks]
6. Briefly describe the process of Vitellogenesis. [3marks]
7. Outline the five basic steps involved in recognition of sperm and egg. [3 marks]
8. Give a brief account of events involved in the late responses of egg activation. [3 marks]
9. Give any three basic types of cell movements involved in gastrulation. [3 marks]
10. Give the three groups of cells in the embryo which differentiate to different tissues. [3 marks]

**Section B – Choose 2 Questions (40 marks)**

11. Describe the structure and function of extra-embryonic membranes in the development of chick. [20 marks]
12. Describe the development, structure and function of mammalian placenta. [20 marks]
13. Describe teratogenesis, and outline the factors that can cause this disorder. [20 marks]
14. Describe in detail the process of formation of neural tube. [20 marks]