

THE OPEN UNIVERSITY OF SRI LANKA

B. Sc. DEGREE PROGRAMME – 2013/14

ZLU2182 – ANIMAL DEVELOPMENT  
CAT 1 (NO BOOK TEST)



DATE: 28<sup>th</sup> February 2014

Time: 10.30 a.m. – 11.30 a.m.

REGISTRATION NUMBER: .....

**Answer all questions.**

This paper consists of two parts, Part A & B.

**Part A** - Q 1 contains 20 multiple choice questions. Tick the correct answers for these questions on the answer sheet provided below.

**Part B** has two questions, Q 2 & Q3. Answers for these questions should be written on the space provided.

Submit the entire paper at the end of the examination.

Answer Sheet for Part A - Q 1

	(a)	(b)	(c)	(d)
1.1				
1.2				
1.3				
1.4				
1.5				
1.6				
1.7				
1.8				
1.9				
1.10				

	(a)	(b)	(c)	(d)
1.11				
1.12				
1.13				
1.14				
1.15				
1.16				
1.17				
1.18				
1.19				
1.20				

Registration No: .....

**Part B**

**Q.2.** Fill in the blanks using suitable terms.

- (A) The egg of *Amphioxus* can be called as a (1)..... egg when consider the amount of yolk present in it. In them, the yolk is distributed in (2)..... manner. The type of cleavage occurs in these eggs can be described as (3) ....., (4) ..... cleavage. The (5) ..... resulting at the end of cleavage has a single layer of (6) ..... and a centric (7) .....
- (B) The initial rapid block to polyspermy in sea urchin egg is caused by the (8)..... of the egg plasma membrane due to transient influx of (9) ..... ions. Then, a mechanism called (10)..... provides a permanent block to polyspermy. The change of egg membrane potential leads to explosive release of intracellular (11) ..... ions to the egg cytoplasm. The (12) ..... located near the periphery of the cell cytoplasm respond to free ions and (13) ..... with plasma membrane and discharge their contents into the space between the (14) ..... and (15) .....
- (C) In the developing chick wing bud, the thickened ectoderm at the apex forms the (16)..... The formation and maintenance of this thickened ectoderm need the influence of underline (17) ..... This zone which lies beneath the thickened ectoderm is called the (18)..... Through the mediation of growth factors (19) ..... causes rapid cell divisions in this zone. These inductive interactions acting in both directions are termed (20) .....

**(30 marks)**

Q. 3. Answer the following questions

3.1. What is the reason for the development of embryo only up to a larval stage in the eggs of some animals?

.....  
.....  
.....

(03 marks)

3.2. The oogenesis of mammals differs from that of other vertebrates in two ways. What are these two differences?

.....  
.....  
.....  
.....

(03 marks)

3.3. How are sperms structurally adapted to fulfill their function?

.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....

(04 marks)

\*\*\*\*\*