



**ZLU2182 – ANIMAL DEVELOPMENT
CAT 1 (NO BOOK TEST)**

DATE: 08th February 2015

Time: 10.30 a.m. – 11.30 a.m.

REGISTRATION NUMBER:

Answer all questions. Answers should be written in the space provided

1. Fill in the blanks given in the table below to compare the formation of gametes in birds and mammals (eutherians). (30 marks)

<u>Description</u>	<u>Bird</u>	<u>Mammal (eutherian)</u>
1.1 Primary oocytes develop	at the adult stage	.....
1.2 Scientific term for the amount of yolk deposited	.....	.....
1.3 The pattern of yolk distribution	.....	.....
1.4 Developing eggs in ovary are covered by	a follicle cell layer	.....
1.5 Development stage at the time of ovulation	Secondary oocyte	.....
1.6 Place of egg fertilization	.....	Oviduct
1.7 The names of the egg membranes	.....	Zona pellucida

1.8 The place of embryonic development	.....	.....

2. Fill in the blanks given in the table below to compare the cleavage and gastrulation of amphioxus, frog and chick.

(30 marks)

Character	Amphioxus	Frog	Chick
2.1 Type of cleavage	.....	.....	.....
2.2 Number of cell layers in blastoderm	One cell layer	..........	..........
2.3 Nature of blastocoels	.....	Eccentric	.....
2.4 The formative cell movement that moves mesoderm	.....	.....	Ingression
2.5 Mesodermal cells move inward through	.....	Blastopore	.....
2.6 The new cavity form at the gastrulation	Archenteron	.....	.....
2.7 The method of coelom formation	.....	Schizocoelic	.....

3. This question is based on the specimen of chick embryo given in Figure 1.

3.1 Label the parts A → J marked in the Figure 1.

(10 marks)

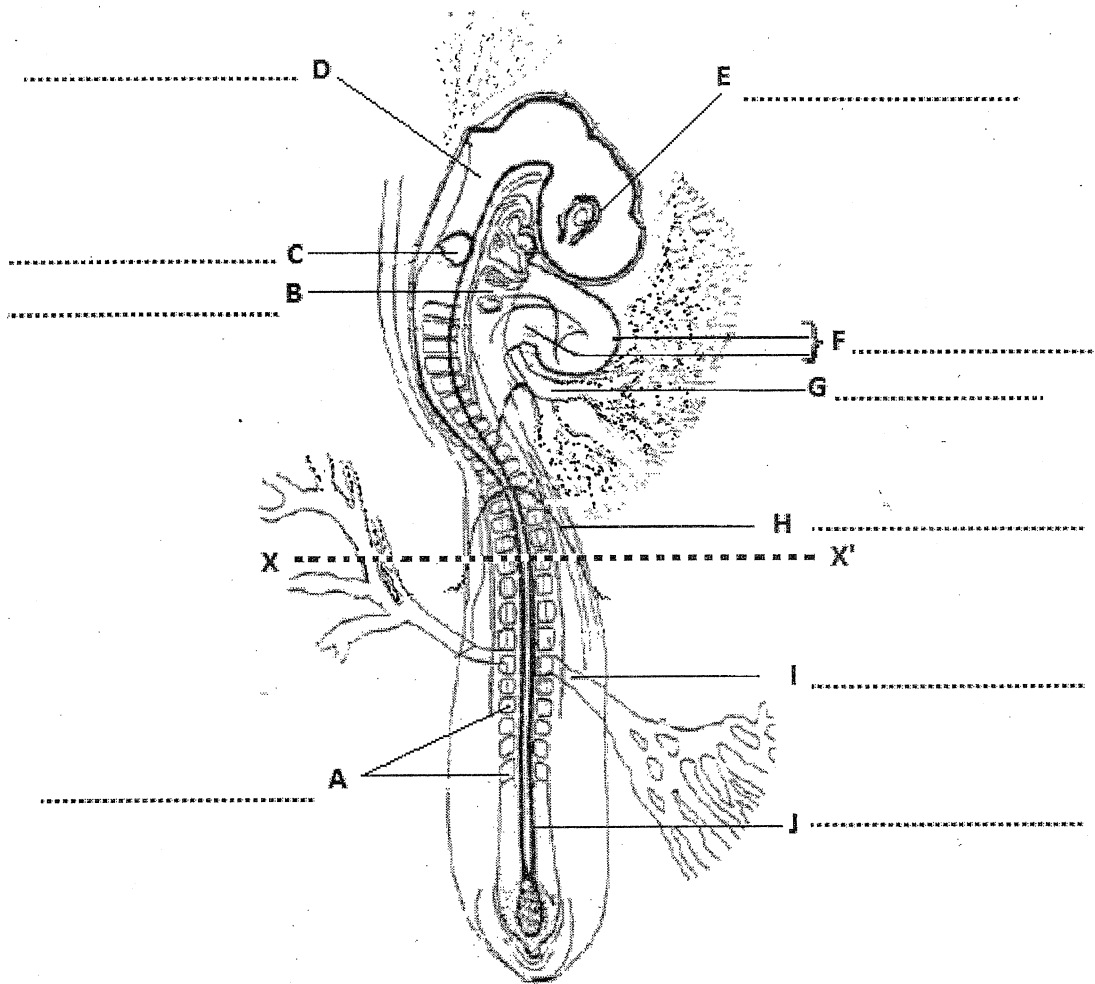


Figure 1

3.2 What is the age of the chick embryo given in Figure 1?

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 (02 marks)

3.3 What are the two reasons for the flexion and torsion seen in the specimen?

.....

 (04 marks)

3.4 State one vertebrate feature seen in the specimen.

.....
 (02 marks)

3.5 Draw the cross section of the specimen going along the X – X' marked in Figure 1.
(10 marks)

3.6 Illustrate the development of the organ 'E' using a series of labeled diagrams.
(12 marks)
