

THE OPEN UNIVERSITY OF SRI LANKA

B. Sc. DEGREE PROGRAMME – LEVEL 04

ZLU2182 – ANIMAL DEVELOPMENT
CAT 2 (OPEN BOOK TEST)



DATE: 07th May 2016

Time: 10.30 a.m. – 11.30 a.m.

REGISTRATION NUMBER:

Answer all questions
Answers should be written in the space provided

This paper consists of two parts, Part A & B. Please submit both parts of the paper together.

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 & Q 3. Answers for these questions should be written on the space provided.

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

Q2 This question is based on some natural and experimental processes applied in developmental biology.

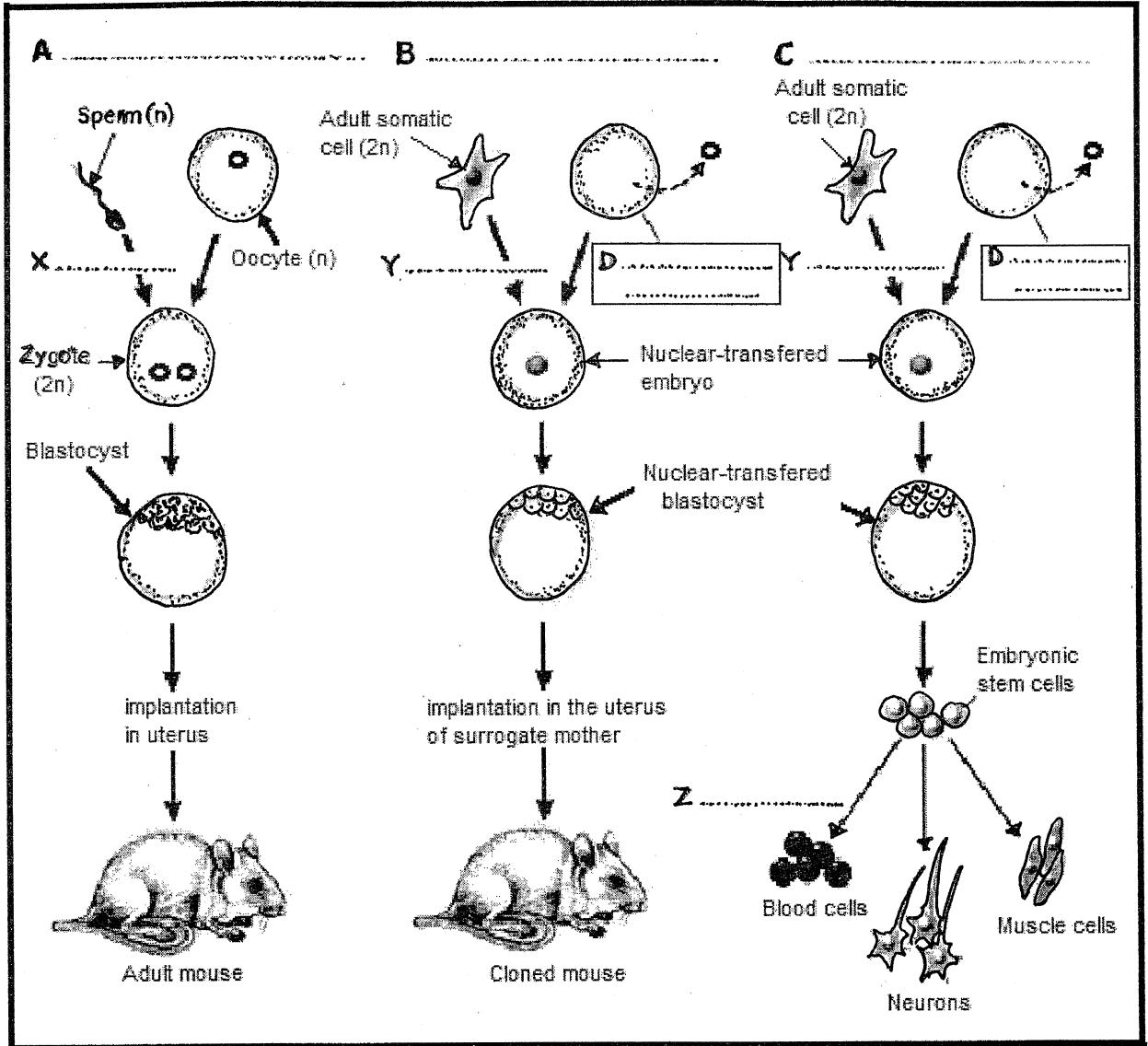


Figure 1

2.1 Give suitable titles for the three processes A, B and C shown in Figure 1.

- A -
- B -
- C -

2.2 Name the sub processes X, Y and Z.

X -

Y -

Z -

2.3 In order to make the processes B and C successful, what is the cell type that should be used as the cell D?

Explain the reason for this:

.....

2.4 Which parent should be identical to the cloned mouse in the process B?

.....

Explain the reason for this:

.....

2.5 In order to accomplish the ultimate target of the process C, from whom should the adult somatic cell be obtained?

2.6 State two differences between the processes A and B.

(i)

.....

(ii)

.....

2.7 State two differences between the processes B and C.

(i)

.....

(ii)

.....

Q3

In 1932, Hans Spemman and Oscar Schotte transplanted a piece of ectoderm from a body flank of a frog embryo to the mouth region of a salamander embryo. The transplanted tissue developed into a typical horny jaw of frog. Answer the following questions based on this experiment.

3.1 What type of information has been given to the grafted tissue by the surrounding tissues of host?

.....

3.2 What is the characteristic feature of induction indicated by the result mentioned in 3.1?

.....

3.3 What is the reason for developing the graft into a horny jaw of frog?

.....

3.4 What is the characteristic feature of induction indicated by the result mentioned in 3.3?

.....

3.5 If a graft of a flank taken from an adult frog is transplanted to the mouth region of a salamander embryo, what will it develop into?

.....

3.6. Give a reason for the answer of 3.5.

.....
