

THE OPEN UNIVERSITY OF SRI LANKA
B.Sc DEGREE PROGRAMME – LEVEL 4
FINAL EXAMINATION - 2016/2017
COURSE CODE – ZLU2280/ZOU2264
COURSE TITLE – ANIMAL FORM AND FUNCTION
DURATION – THREE HOURS



Index Number

Date : 16th January 2018

Time : 9.30 am – 12.30 pm

Instructions

- This question paper has two parts , **Part A** and **Part B**.
- **Part A**, structured essay question, is compulsory and answers should be written in the space given in question paper.
- Answers for **Part B** should be written in answer books/papers
- Please hand over both **Part A** and **Part B**.

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Part A

Question 1. (100 marks)

1. The endocrine system is one of the main regulatory and coordinating systems of human body.

1.1.i. What is the typical character of the endocrine system compared to other systems.

(2 marks)

1.1.ii. What do you call the secretion of endocrine system.

(1 mark)

1.1.iii. Write 4 specific characters of endocrine secretions.

1 -----

2 -----

3 -----

4 -----

(8 marks)

1.1.iv. How does pheromones released by animals differ from endocrine secretion?

(2 marks)

1.2. Figure 1 shows various stages of development of human ovum .

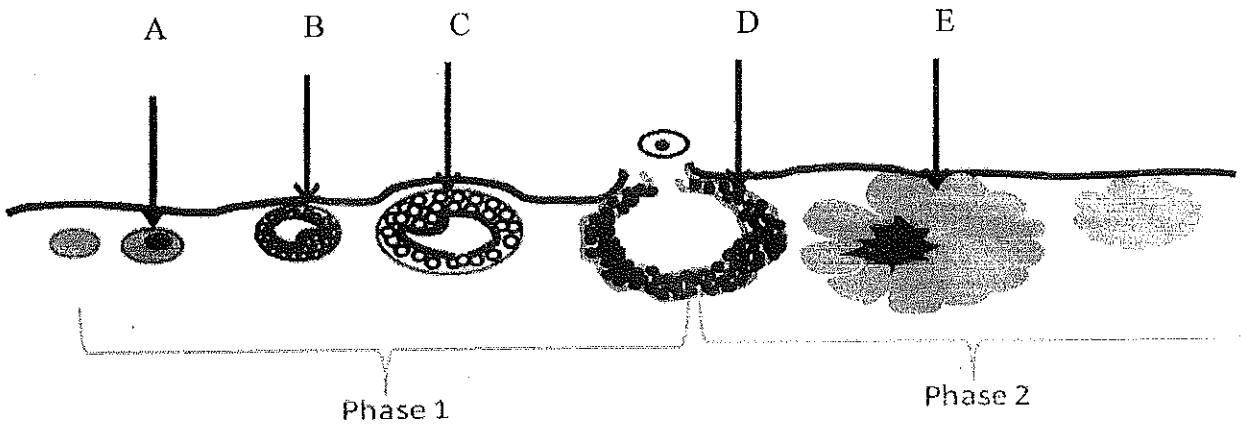


Figure 1

1.2.i. Name A,B,C,D and E shown in Figure 1 .

A-----

B-----

C-----

D-----

E-----

(5 marks)

1.2.ii. Name the phase 1 and 2 & relevant chemical secretions from each phase.

Name of phase		
Secretion		

(4 marks)

1.2.iii. What is the main function of chemical secretions that you have mentioned in 1.2.ii?

(4 marks)

1.2.iv. Draw a graph below to show the changes of levels of secretions in blood during phase 1&2.

(5 marks)

1.2.v. What would be the levels of above sections in blood of a pregnant woman?

(2 marks)

1.2.vi. Name the event that usually takes place between two phases.

(1 mark)

1.2.vii. What would prevent further production of ova, if fertilization and implantation take place ?

(2 marks)

1.3.a. What are the major and minor endocrine secretions that regulate glucose level in blood?

(3 marks)

1.3.b. Name endocrine organs/glands that release secretions which you have mentioned in 1.3.a. .

(3 marks)

1.3.c. Describe how organs mentioned in 1.3.b are structurally adapted to regulate blood glucose level.

(5 marks)

1.3. d. Name the control mechanism that exists in human body to bring the glucose to normal level.

.....
 (1 marks)

1.3. e. Name three major components of the control mechanism that you mentioned in 1.3.d.

.....

 (4 marks)

1.3.f. Draw a diagram below to illustrate the relationship among all components that you have mentioned in 1.3.e.

(5 marks)

1.4. When body temperature is changed similar controlling mechanism is operated. **Figure 2** below shows a summary of structures involved in regulation of body temperature.

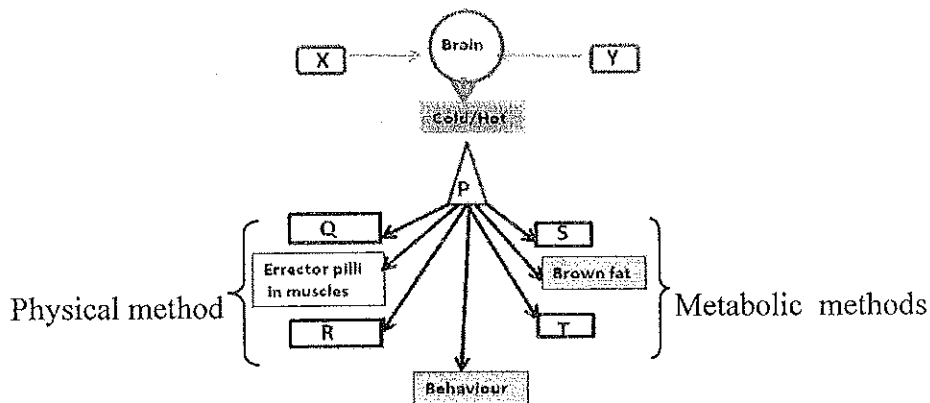


Figure 2

1.4.1a. Name P,Q,R,S,T,X and Y

P..... Q.....
 R..... S.....
 T..... X.....
 Y.....

(7 marks)

1.4.1b. Write the functions of X and Y.

X-----
Y-----

(4 marks)

1.4.1c. Which part of the brain contain the hot and cold centres ?

(2 marks)

1.4.2. Write two behavioral methods that shows by animals as shown in flowchart.

(2 marks)

1.4.3. Classify the animals on the basis of the ability to regulate body temperature.

Animal	Can regulate body temperature	Cannot regulate body temperature
Group		

(2 marks)

1.4.4. Write the difference between endotherms and ectotherms animals.

(4 marks)

1.4.5. Name the specific system present in animals living in cold water to minimize the heat loss.

(2 marks)

1.4.6. Describe how the specific system mentioned in 1.4.5. operates in animal living in coldwater.

(5 marks)

1.4.7. What is mean by critical temperature ?

(5 marks)

1.4.8. What is heat stroke ?. Mention how it can be prevented in human body.

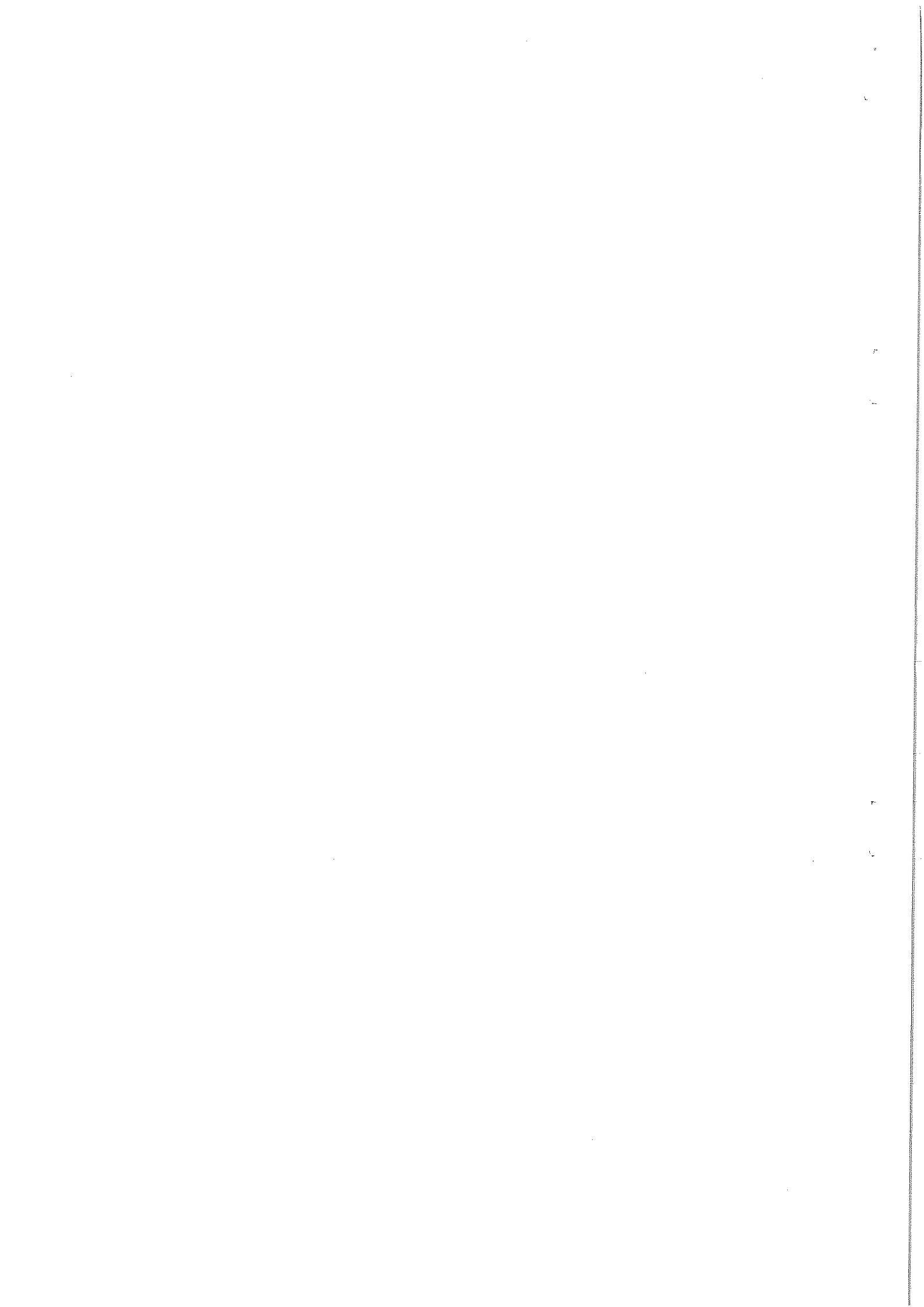
(7 marks)

1.4.9. Even at temperature of 25⁰C with high percentage humidity feels uncomfortable .

Explain why ?

(3 marks)

(Total marks 100)



12

12

12

12

12

12