

**Name**

**Centre/Index No.**

**Signature**

**P530/2**

**BIOLOGY**

**Paper 2**

**2<sup>nd</sup> Term Holiday Aug 2014**

**2 hours 30 minutes**

**GHS S.6 BIOLOGY**

**(THEORY)**

**Paper 2**

**2 hours 30 minutes**

**INSTRUCTIONS TO CANDIDATES**

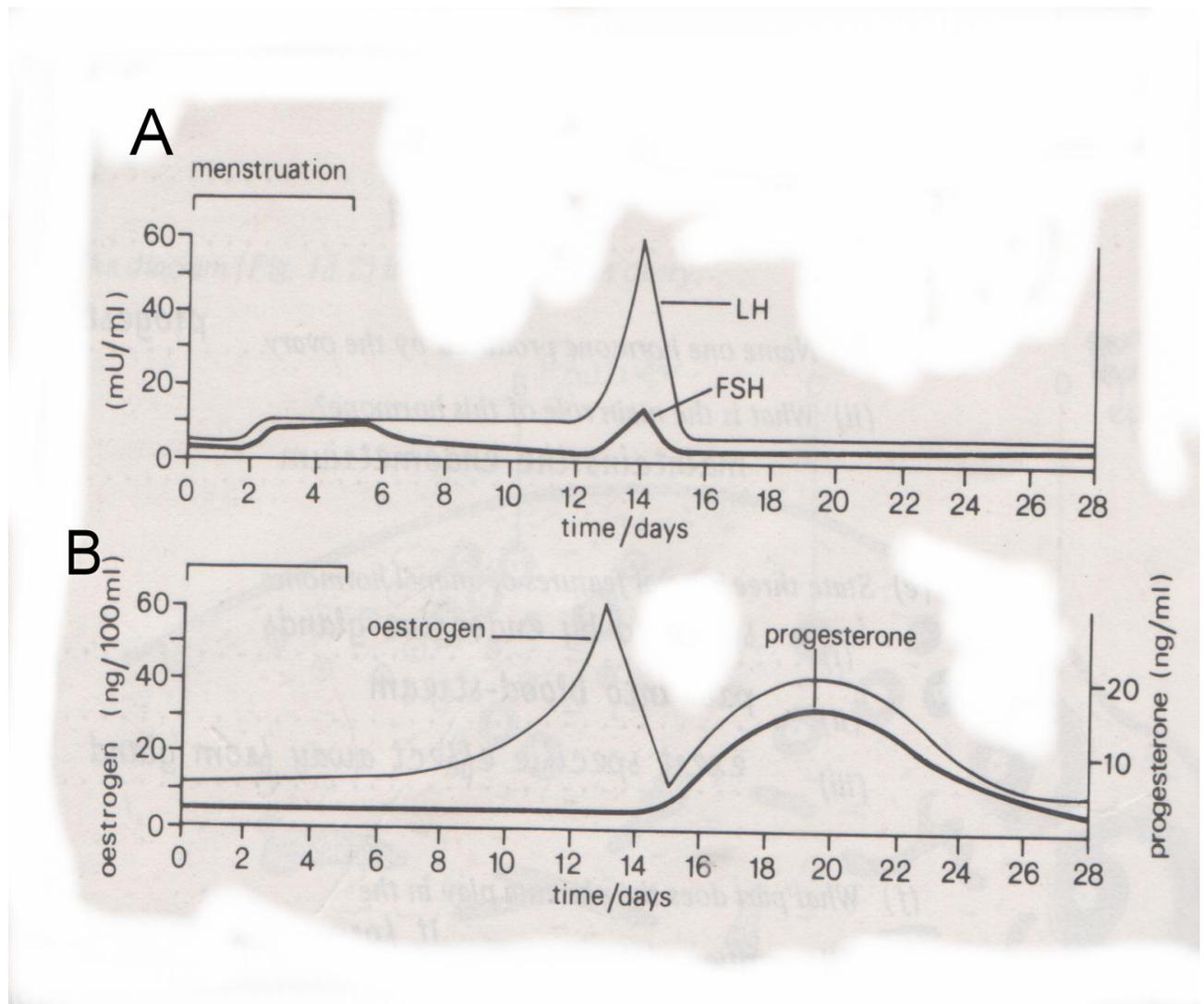
**Answer question 1 in Section A. Attempt three questions from Section B.**

**STRICTLY Choose one question from Subsection I and two from subsection II in Section B.**

**Your answers must be well-organised and illustrated with appropriate diagrams whenever necessary.**

## SECTION A

1. Graph A and B deal with concentration changes, indicating the amounts of hormones present in the blood throughout the cycle..



- Describe the trends of the curves in graph A (10 marks).
- Give reasoned explanations for the changes expressed by the curves in graph A and graph B, relating them to each other where possible. (20 marks).
- What would happen to the concentrations of the hormones if the ovary was surgically removed. Explain your answers. (05 marks).
- State three general features of animal hormones (03 marks).

e)What is the main role of progesterone(02 marks.).

## **SECTION B**

### SUB-SECTION I

2. . a) i) Giving an example, explain what is meant by continuous variation.  
ii) How does sexual reproduction cause variation?  
b) Explain how the environment may influence the process of natural selection.  
3 a) Describe the physiological and structural factors of the water hyacinth which have enabled it to spread and persist on a Lake.  
b) Outline the ecological dangers of this weed on the water.  
c) Suggest three control methods of the water weed ,and for each method point out its weaknesses.  
4.a) Using appropriate flow diagrams,outline the C<sub>4</sub> pathway of carbondioxide fixation in plants.  
b) Compare and contrast the C<sub>3</sub> and C<sub>4</sub> pathways of carbondioxide fixation in plants.

### SUB-SECTION II

- 5.a) Define and explain the importance of a balanced diet . ( 07 mKs)  
b) With reference to a named herbivorous animal describe the process of digestion of the food the animal consumes. (12 mks)
6. (a) Describe the structure and adaptation to function of the following tissues:  
(i) parenchyma  
(ii) collenchyma  
(in) sclerenchyma (12 marks)
- (b) Compare the distribution of tissues in dicotyledonous stem and root in relation to the mechanical functions of the stem and root (8 marks)
7. (a) Describe the various pathways of water from the root to the xylem (06 marks )  
(b) By what mechanism does water move through the xylem? (06 marks)  
(c) How is the xylem adapted for water transport? (08 marks)