



(Knowledge for Development)

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KIBABII UNIVERSITY
UNIVERSITY EXAMINATIONS
2019/2020 ACADEMIC YEAR

FOURTH YEAR FIRST SEMESTER
SPECIAL/ SUPPLEMENTARY EXAMINATIONS

FOR THE DEGREE OF BACHELOR OF SCIENCE IN BIORESOURCE

COURSE CODE: SZL 416

COURSE TITLE: ENVIRONMENTAL PHYSIOLOGY

DATE: 1st February, 2021. **TIME:** 8:00 – 10:00 a.m.

INSTRUCTIONS TO CANDIDATES

Answer Question one (1) and any other two (2) Questions. Question one is compulsory and carries 30 marks, the other Questions carry 20 marks each.

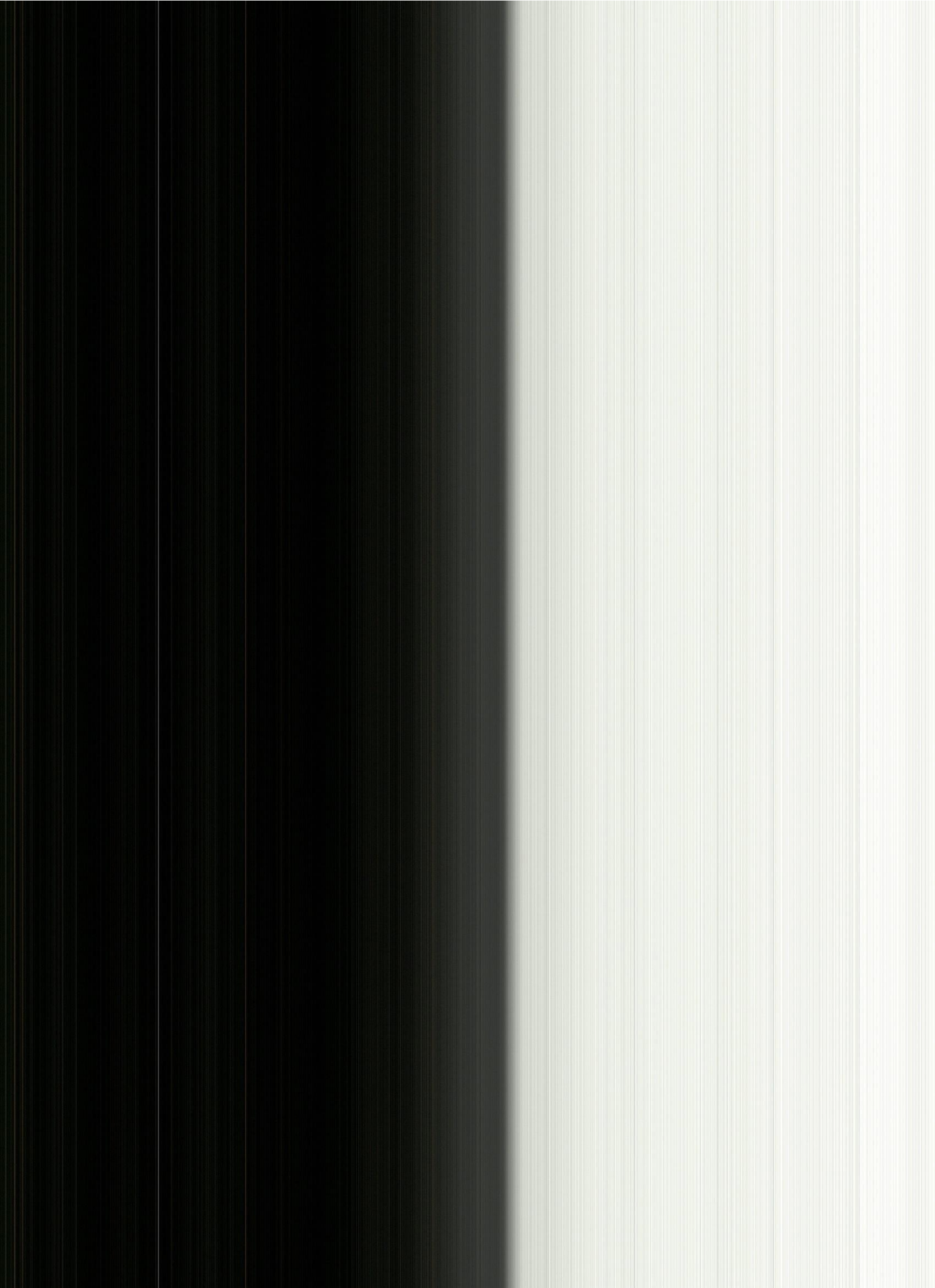
TIME: 3 Hours

This paper consists of 2 printed pages. Please Turn Over



KIBU observes ZERO tolerance to examination cheating

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Question One

- a. State three ways by which birds in the desert accomplishes thermoregulation (3 Marks)
- b. Distinguish between damping and entrainment in biological rhythms (3 Marks)
- c. Explain the Haldane effect (3 Marks)
- d. Briefly describe arousal in hibernating animals (3 Marks)
- e. Explain who are osmoconformers organisms (3 Marks)
- f. Differentiate between critical temperature and sensible heat loss (3 Marks)
- g. Explain the meaning of induced ovulations (3 Marks)
- h. State the advantage of long loops of Henle in mammalian kidneys (3 Marks)
- i. State the function of Glycerol, Trim ethylamine oxide and Blubber (3 Marks)
- j. State three disadvantages of water as a respiratory medium (3 Marks)

Question Two

Explain the harmful effects of both hypothermia and hyperthamia (20 Marks)

Question Three

Describe how plants use toxins for self defense against foragers (20 Marks)

Question Four

Discuss various factors that effect oxyhaemoglobin dissociation curves (20 Marks)

Question Five

Describe osmoregulation in fresh water teleost fish (20 Marks)