

CAMEROON GENERAL CERTIFICATE OF EDUCATION BOARD

GENERAL CERTIFICATE OF EDUCATION EXAMINATION

JUNE 2005

ORDINARY LEVEL

Subject Title	Biology
Paper No.	Paper 2
Subject Code No.	510

Two hours.

Answer FOUR questions Two from Section A and Two from section B. All questions carry equal marks. Marks allocated to parts of questions are indicated in brackets.

Give labelled diagrams where these will make the answers clearer.

You are reminded of the necessity of good English and orderly presentation in your answers.

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Turn Over

SECTION A

1. (a) Draw a large labeled diagram to show the external features of a dipteran fly such as housefly. (7 marks)
(b) Why are insects considered the most successful animals on land? (15 marks)
(c) How is the housefly economically important? (3 marks)
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2. (a) Define the following terms:
(i) Active transport, and (3 marks)
(ii) Osmosis (3 marks)
(b) What is the importance of:
(i) Osmosis in flowering plants, and (6 marks)
(ii) Water in living organisms. (13 marks)
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3. (a) What is an ecosystem? (4 marks)
(b) Explain the following terms as used in Ecology:
(i) Parasitism, (5 marks)
(ii) Saprophytism, (4 marks)
(iii) Predation, and (3 marks)
(iv) Community. (2 marks)
(c) Describe the flow of energy in an ecosystem? (7 marks)
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4. (a) Explain how environmental factors affect the rate of transpiration. (11 marks)
(b) Describe an experiment to measure the rate of transpiration by a leafy shoot. (4 marks)
(c) What would happen to the leaves of a plant which was losing water by transpiration faster than it was taking it up from the roots? (4 marks)
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SECTION B

5. (a) State the functions of the mammalian brain. (8 marks)
(b) What is the part played by the adrenal gland in coordination? (12 marks)
(c) Distinguish between nervous and hormonal responses. (5 marks)
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6. (a) What is a gene? (2 marks)
(b) Give two examples in each case, state the differences between haploid and diploid cells. (8 marks)
(c) The seed resulting from a cross between white-flowered and red-flowered parents produced a generation of pink-flowered plants. Explain with the aid of appropriate symbols and diagrams what you would expect the next generation of flowers to be if:
(i) The pink-flowered plants were allowed to self-pollinate.
(ii) The pink-flowered plants were crossed with the white-flowered parent.
(All stages of your reasoning should be shown) (15 marks)
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7. (a) Distinguish between autotrophic and heterotrophic nutrition. (6 marks)
(b) Describe an experiment to show that carbon dioxide is necessary for photosynthesis. (12 marks)
(c) What is the importance of photosynthesis to living organisms? (7 marks)
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8. (a) Why is excretion necessary in living organisms? (3 marks)
(b) How would you test for the presence of blood sugar in the urine of a diabetic patient? (4 marks)
(c) Describe the role played by the following organs in animals:
(i) Skin, and (4 marks)
(ii) Kidney. (14 marks)