



BIOLOGY 2

0710

CAMEROON GENERAL CERTIFICATE OF EDUCATION BOARD

General Certificate of Education Examination

JUNE 2001

ADVANCED LEVEL

Subject title	BIOLOGY
Paper No.	2 - Theory
Subject Code No.	0710

Three hours

Answer ANY FIVE out of the eight questions.

If more than five questions are answered, only the first five will be marked.

All questions carry equal marks. Marks allocated to parts of questions are indicated in brackets.

Illustrate your answers wherever desirable with large, clear and fully labelled diagrams.

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

In calculations, you are advised to show all the steps in your working, giving your answer at each stage.

Meet us at www.alstug.com



Turn over

00/0710/2/C/Q

© 2001 CGCEB



1. a) With respect to a ruminant , describe digestion in,
 - i. The mouth
 - ii. The stomach
 - iii. The intestine

(b) What is the importance of roughage in the gut?

(4,6,6,2 marks) (Total= 20marks)

2. The data below show the number of AIDS cases in a certain country by year from 1982 to 1989.

Year	Heterosexuals	Homosexuals	Total cases
1982	0	3	3
1983	1	23	26
1984	2	69	77
1985	3	152	159
1986	7	293	305
1987	26	494	648
1988	33	602	761
1989	64	654	851
Total	135	2290	2830

(a) (i) Use the data given in the table above to draw bar charts to illustrate the number of reported AIDS cases in that country for each risk group.

(ii) Calculate for homosexuals, the percentage of the total AIDS cases they represent for the years 1982, 1984, 1989.

(b) The below show the total HIV positive cases in that same country for September 1989 based on figures from the Government 's diseases surveillance Centre.

Category	Total	Percentage total
Injecting drug users	1771	
Recipient of blood /blood products	1206	
Heterosexuals contact	714	
Child of HIV antibody positive/ at risk mother	136	
Male homosexuals /bisexual	5390	
Others/incomplete information	2001	

(i) Copy and complete the table above, converting the totals to percentage figure

(ii) In question 'a' you were given data concerning reported AIDS cases. Whereas un question 'b' the data concerns HIV positive cases. Explain why the later figures are much higher?

(iii) From your bar charts, comment the trends is the spread of HIV/AIDS and heterosexuals and homosexuals.

(iv) Suggest tow ways by which the country can prevent the spread of HIV/AIDS and heterosexuals.

(6,3,3,3,2 marks) (Total = 20 marks)

3. In guinea pigs (*Cavia porcello*), black coat colour is dominant to brown and short hair is dominant over long hair? These characteristics are not linked. A breeder has only stocks of pure breeding short haired brawn and pure breeding short haired black guinea pigs.

- a. What do you understand by,
 - i. Linked genes and
 - ii. Pure breeding



- b. Explain clearly the breeding program to be followed (using just TWO breeding steps) to obtain pure breeding long-haired black guinea pigs.
- c. Show how you will ascertain that you have obtained pure breeding long-haired, black guinea pigs.

(2,14,4,marks) (Total =20marks)

-
4. (a) Describe the role of
- i. Carbohydrates
 - ii. Proteins and
 - iii. Lids in the structure of plant and animal cells.
- (b) How do antibiotic treat some bacterial diseases?

(16,4 marks) (Total =20 marks)

-
5. (a) What is alternation of generation?
- (b) Give an illustrated account of alternation of generation in the life cycle of a named fern.
- (c) How does this life differ from that of a moss?
- (d) What is the importance of water in this life cycle?

(4, 10,3,3,marks) (Total =20marks)

-
6. (a) Describe
- i. The production and
 - ii. The removal of urea un mammals and ethanol in plants
 - iii. Explain why mammals produce large quantities of urine during fright

(16,4 marks) (Total =20marks)

-
7. (a) Explain the homeostatic principle
- (b) What physiological events would you expect to take place in a diabetic after
- i. Injecting a small quantity of glucose into the blood stream
 - ii. Eating a very salty meat

(8,12 marks) (Total =20marks)

-
8. (a) State the main features of arthropods
- (b) Explain why insects are so successful in their life on land.
- (c)
- i. State FIVE ways in which HIV/AIDS it transmission of HIV/AIDS?
 - ii. Why are mosquitoes not likely for the transmission of HIV/ADIS?

(4,9,7 marks) (Total= 20marks)

Meet us at www.alstug.com

Scan the QR code





Meet us at www.alstug.com