



SCIENCE DEPARTMENT
YEAR 11
2B HUMAN BIOLOGY EXAMINATION

Multiple Choice & Essay Booklet

TIME ALLOWED FOR THIS PAPER

Reading time before commencing work:	Ten minutes
Working time for paper:	Three hours

SECTION 1: Multiple Choice – 40 Questions – 40 Marks – 40%
Answer the multiple choice questions by crossing out the letter of your choice on the answer sheet provided.
Use a 2B pencil here.

SECTION 2: Short Answers – 10 Questions – 90 marks – 40%
Answer the questions in the spaces provided. Answers are to be in BLUE or BLACK ink.
GRAPHS and DRAWINGS to be in pencil and labelled in ink.

SECTION 3: Extended Answer – 2 Questions – 40 marks – 20%
Answer question 1 OR question 2

AND

Answer question 3 OR question 4.

**SCIENCE**

NAME: _____

Please indicate your answer with a cross (X) within the box.

1	A	B	C	D	E
2	A	B	C	D	E
3	A	B	C	D	E
4	A	B	C	D	E
5	A	B	C	D	E
6	A	B	C	D	E
7	A	B	C	D	E
8	A	B	C	D	E
9	A	B	C	D	E
10	A	B	C	D	E
11	A	B	C	D	E
12	A	B	C	D	E
13	A	B	C	D	E
14	A	B	C	D	E
15	A	B	C	D	E
16	A	B	C	D	E
17	A	B	C	D	E
18	A	B	C	D	E
19	A	B	C	D	E
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25	A	B	C	D	E
26	A	B	C	D	E
27	A	B	C	D	E
28	A	B	C	D	E
29	A	B	C	D	E
30	A	B	C	D	E
31	A	B	C	D	E
32	A	B	C	D	E
33	A	B	C	D	E
34	A	B	C	D	E
35	A	B	C	D	E
36	A	B	C	D	E
37	A	B	C	D	E
38	A	B	C	D	E
39	A	B	C	D	E
40	A	B	C	D	E

Fill in the answers to your essays in this booklet. Number your questions appropriately.

All answers are to be written in blue or black biro pen. Diagrams are to be done in pencil with labels. Spelling and grammar count towards your final mark. Good luck!

PART A

ANSWER EITHER QUESTION 16 OR QUESTION 17 - NOT BOTH

QUESTION 16

- (a) Offspring may show variations that do not resemble either parent and have never occurred before in the history of the family. These may occur quite suddenly and purely by chance. These characteristics are referred to as mutations. Explain and give examples on the differences between 'Gene Mutations' and 'Chromosomal Mutations'.

(10 marks)

- (b) The kidney is structurally suited to the function that it performs in the body. Describe how the structural features are related to the working of the kidney

(10 marks)

OR

QUESTION 17

There is a hypothesis that children today are developing health problems such as allergies and are more susceptible to diseases because they now live in a more sterile environment. It is hypothesised that in previous generations children were dirtier and therefore did not suffer these illnesses to the same extent (*the hygiene hypothesis*).

- (a) Explain what is required for the development of the immune response.

(14 marks)

- (b) Apply this to explain the logic of the hygiene hypothesis.

(6 marks)

AND

PART B

ANSWER EITHER QUESTION 18 OR QUESTION 19 – **NOT BOTH**

QUESTION 18

- (a) Outline five different methods of birth control. For each explain the mechanism by which it works, the effectiveness and side effects of each one.
(10 marks)
- (b) Draw diagrams to show the stages Oogenesis and Spermatogenesis. Explain what is happening in each stage.
(6 marks)
- (c) What are the initial changes a woman would notice to identify she was pregnant?
(4 marks)

OR

QUESTION 19

After fertilization occurs, changes develop in the mother's body.

- (a) Describe the changes in the uterus during pregnancy that allows pregnancy to continue.
(6 marks)
- (b) Explain how the milk let-down reflex is used in taking care of a newborn baby.
(4 marks)
- (c) Pregnancy finishes with the process of childbirth. Describe what happens during the *three* stages of labour. Describe the role of the hormones during childbirth.
(10 marks)

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