

2001 HIGHER SCHOOL CERTIFICATE EXAMINATION

Biology

Section I – Part B (continued)

Marks

Question 25 (3 marks)

Antibiotics are drugs widely used in most industrialised societies. They are used to treat bacterial infections, are added to animal feed, and have been included in plastic products such as sandwich bags.

3

Explain TWO possible effects of this widespread use of antibiotics on the likely spread of disease in the future.

CONTINUOUS USE OF THE SAME QUALITY OF ANTIBIOTICS  
MAY RESULT/CAUSE THE BACTERIA TO BE RESISTANT IN THE FUTURE.

Question 26 (3 marks)

When a body organ is transplanted from one person to another, the immune system of the recipient is triggered.

(a) Patients who have an organ transplant are given drugs to suppress their immune response. State the reason for this.

1

So the patient's <sup>immune system</sup> becomes familiar with the transplant. So it doesn't reject the organ transplant.

(b) Explain a possible consequence for the general health of organ transplant patients as a result of suppressing the immune system.

2

By suppressing the immune system, organ transplant patients are given time to get used to their new organ, and for their body to familiarise/adapt to their new organ.

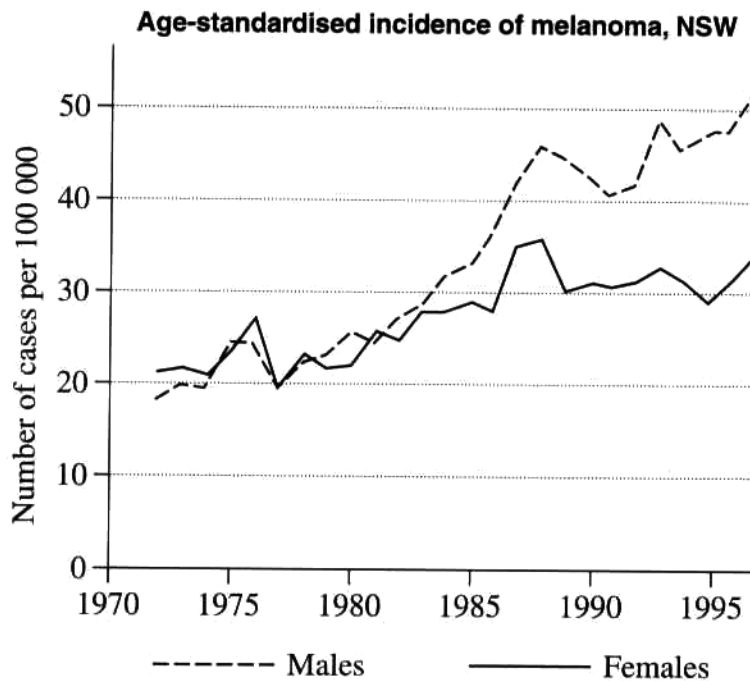
Marks

Question 27 (4 marks)

Epidemiological studies have demonstrated a relationship between ultraviolet radiation exposure and the development of melanoma, a type of skin cancer.

4

The graph shows the rate of occurrence of melanoma in males and females between 1972 and 1997.



A student studying the graph made the following statement.

‘The incidence of melanoma will continue to increase beyond 1997 at a greater rate in males than in females.’

Analyse the data in the graph to assess the validity of this statement.

*This is true because the graph shows that males have a greater rate of this type of skin cancer & moving at a fast rate as men have their shirts off & women tend to cover up in the sunny periods.*

Marks

Question 28 (8 marks)

Evaluate the impact of major advances in scientific understanding and technology, in the field of genetics, on developments in reproductive technologies.

8

reproductive technologies have come a long way since scientists first began. the introduction cloning was a huge step for them, letting them create a technology that allows them to create an exact replica of something.

This has already been tested, but they are still a long way off discovering how to clone humans.

reproductive technologies have ~~also~~ come along way ~~also~~ also. especially in endangered species. they put endangered species in special areas so they can reproduce more of some species. then they let out into wild with specially marked tags so they can keep track of them.