Homeostasis and response

Biology Paper 2 | 5 questions, 6 marks each

GCSE science 6-mark questions

This topic online

Name: _____ **Date:** _____ **Score:** _____ **/ 30**

Plan before you write: jot down the 6 or more ideas you need, then put them in a sensible order. For compare questions give both sides of each point; for evaluate questions use the information and finish with a conclusion.

1 Mei is cooking at home in Manchester. She accidentally touches a hot pan and pulls her hand away before she feels any pain.

Describe how this reflex action happens.

(6 marks)

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2 **Higher tier**

Daniel eats a large bowl of pasta at lunchtime. In the evening he plays football for two hours without eating anything else.

Explain how Daniel's body keeps his blood glucose concentration within a normal range during the afternoon and the evening.

(6 marks)

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3 A GP surgery in Cardiff has information about two patients with diabetes.

	Patient A	Patient B
Age when diagnosed	9	54
Body mass index	18 (healthy)	34 (obese)
Insulin made by pancreas	almost none	normal amount
Response of body cells to insulin	normal	reduced

Use the data to identify the type of diabetes each patient has. Explain how each type should be treated.

(6 marks)

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4 Mr Adeyemi's kidneys have failed. His doctors tell him about two treatments.

Dialysis	Kidney transplant
Three sessions a week, each about 4 hours, in hospital	One major operation
Strict diet: limits on salt, protein and fluids	Normal diet once recovered
Available straight away	Waiting list of 2 to 3 years for a donor kidney
Costs the NHS about £30 000 a year	About £17 000 for the operation, then about £6000 a year for drugs

Evaluate the two treatments. Give a justified conclusion.

Separate science only

(6 marks)

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5 A sexual health clinic gives information on two methods of contraception: the contraceptive pill and condoms.

Compare these two methods, including how each one works and its advantages and disadvantages.

(6 marks)

End of questions | Total 30 marks

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