

## End-of-Topic Test: Life and Living Processes 2: Lower Levels

### Level 4

1 Science has shown that smoking is dangerous.



a) Name **two** chemicals that a person inhales when they smoke.

i) ..... [1 mark]

ii) ..... [1 mark]

b) i) Name the chemical in cigarettes that is addictive. [1 mark]

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ii) What does addictive mean? [1 mark]

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.....

c) Smoking produces carbon monoxide.

What effect does carbon monoxide have on your body? [2 marks]

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2 Fran was a Year 9 pupil. She carried out a survey of her classmates. Here are her results:

Characteristic	Number of girls	Number of boys
Blue eyes	9	5
Brown eyes	5	7
Green eyes	1	0
Had freckles	7	8
Had no freckles	8	4

Look at the figures Fran recorded.

Put a tick ( ✓ ) by the correct statements and a cross ( ✗ ) by the incorrect ones:

[6 marks]



- i) more boys had brown eyes than girls
- ii) more girls had freckles than boys
- iii) 15 pupils had blue eyes
- iv) twice as many girls had freckles than boys
- v) two girls had green eyes
- vi) there were 27 pupils in the class.

3 A person's features, what they look like, can be either inherited or the result of environmental factors.

a) Give **two** examples of inherited features. [2 marks]

- i) .....
- ii) .....

b) Give **two** examples of features that are the result of a person's environment. [2 marks]

- i) .....
- ii) .....

4 Some plants such as strawberries and spider plants can reproduce by producing little plants on the ends of special stems called 'runners'.

a) Explain why plants produced at the ends of runners are identical to the main plant. [2 marks]

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b) Humans do not reproduce like this. They produce sex cells.

Explain how sex cells are used in reproduction. [2 marks]

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c) Why do children often look like their parents? [2 marks]

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**Level 5**

5 Domestic cattle have been produced by artificial selection (also known as selective breeding).

a) What is artificial selection? [2 marks]

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b) Suggest a reason why farmers would want to selectively breed cattle. [1 mark]

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c) How long did it take to selectively breed cattle? [1 mark]

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6 Mr Corbett was a gardener. Sadly he was not very good at gardening!  
His lawn was full of dandelions. Dandelions can have roots over a metre deep.  
Even though he kept pulling the dandelions up, they kept on re-growing.

a) Why did the dandelion plants keep re-growing? [1 mark]

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b) The new plants that kept growing were genetically identical to those that he pulled up.

What does genetically identical mean? [1 mark]

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c) What advice could you give Mr Corbett so that he could completely rid his lawn of dandelions? [2 marks]

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d) Why do dandelions have yellow flowers? [1 mark]

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7 Sammy and Matty are identical twins. They have inherited genetic information from their parents.

a) What does 'inherited' mean? [1 mark]

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b) Explain what caused Sammy and Matty to be identical. [2 marks]

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c) There are always differences between identical twins.

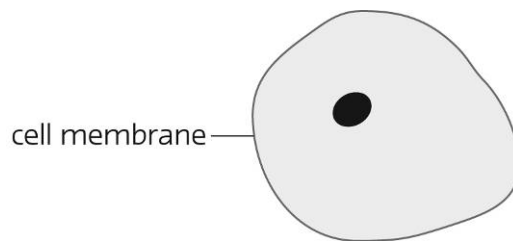
Explain what causes these differences.

[1 mark]

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8 Here is a diagram of a cell.



a) Label the nucleus. [1 mark]

b) Where would you expect to find chromosomes? [1 mark]

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c) Write a sentence that explains the difference between chromosomes and genes. [2 marks]

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**Level 6**

9 Sometimes people become very angry.

a) Explain how some people express their anger:

i) physically: [1 mark]

.....

ii) psychologically: [1 mark]

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b) Give **two** reasons why people might show aggression. [2 marks]

i) .....

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ii) .....

.....

c) Animals also show aggression.

Give **two** reasons why animals become aggressive. [2 marks]

i) .....

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ii) .....

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