

AQA, OCR, Edexcel

GCSE Science

GCSE Biology

Decomposition Answers

Name:

M M E

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Total Marks: /19

Q1: Give 2 organisms types involved in the decay process?

A= 1 mark for each point

1. Scavengers
2. Decomposers

Also accept bacteria

(2 marks)

Q2: Discuss ways of altering the rate of decay.

A= 1 mark for each of the following points:

Temperature:

- Too hot enzymes denatured
- Cold slows the rate of reaction

Moisture:

- Microorganisms grow faster in moisture
- Moist environment will increase decomposition

Oxygen:

- Most require oxygen to respire
- Decomposition occurs faster in oxygen rich environments

(6 marks)

Q3: Compost is a natural fertiliser. What components of decomposition are released back into the environment?

A= Nutrients

(1 mark)

Q4: Discuss the differences in rates of compost production between the winter and summer.

A= 1 mark for winter point and 1 mark for summer point.

- Winter – Cold temperature – slows production
- Summer – Warm temperature – faster production

(2 marks)

Q5: Decomposition can occur without oxygen. What types of bacteria are responsible for decomposition in these conditions?

A= Anaerobic bacteria

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(1 mark)

Q6: Give the by-product of composting in anaerobic conditions and give an example of the use of the by-product.

A= 1 mark awarded for: Methane

1 mark awarded for any 1 of the following:

- Heating
- Cooking
- Generating Electricity
- Vehicle fuel

(2 marks)

Q7: What term is used to describe the utilisation of the anaerobic composting by-product?

A= Biomass generator

(1 mark)

Q8: What is the ideal temperature for biogas production?

A= 30°C

(1 mark)

Q9: What type of reaction is the process of biogas production?

A= Exothermic

(1 mark)

Q10: Biogas is an example of what type of energy?

A= Renewable

(1 mark)

Q11: Using the graph below state the optimum temperature of a compost heap.

A= 60°C

(1 mark)