

**AQA, OCR, Edexcel**

**GCSE Science**

# **GCSE Biology**

**Role of Biotechnology Answers**

Name:

**M M E**

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**Total Marks: /18**

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Q1: Give an example of the use of biotechnology to meet global food demands.

A= Genetic Modification

(1 mark)

Q2: Biotechnology allows what to be used as a food source?

A= Microorganisms

(1 mark)

Q3: i) The Fungus *Fusarium* is an example of what type of food source?

A= Mycoprotein

(1 mark)

ii) What process is used to grow *Fusarium*?

A= Fermentation

(1 mark)

Q4: Explain how *Fusarium* is produced.

A= 1 mark for each of the following points:

- Produced in fermenter
- Uses waste glucose syrup for growth
- Large yields
- Aerobic conditions

(4 marks)

Q5: Once harvested explain how *Fusarium* can be used as a food source.

A= 1 mark for each of the following points:

- Purified
- Shaped and Flavoured

(2 marks)

Q6: Give an example of where modified bacteria is used to treat disease.

A= Insulin/ Diabetes

(1 mark)

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Q7: Explain why *Fusarium* is a sustainable food source.

A= 1 mark for each of the following points:

- Cheap
- Rapid Production

(2 marks)

Q8: Give an example of how genetically modified crops can help ease the burden of food availability.

A= Accept any of the following:

- Increase yield
- Disease resistance
- Faster growth

(1 mark)

Q9: Give an example of a genetically modified crop.

A= Golden Rice

Also accept any other accurately identified crop which has been modified e.g. – winter barley/ wheat

(1 mark)