

GCSE Biology A (Gateway)

J247/02 B4-B6 and B7 Foundation (Foundation Tier)

Question Set 18

1

Over the whole world the demand for food to feed humans is increasing

- (a) Describe why is there an increasing demand for food.

the population is increasing very fast

[1]

- (b) Genetic modification (GM) is one method that humans are using to try and produce more food.

- (i) What is genetic modification?

taking a gene coding for a characteristic you want from one organism, and inserting it into another using a vector, so that organism can express it.

[2]

- (ii) Scientists can use GM to alter the features of crops.

One feature is crop yield.

Suggest **two other** features of crops they could change.

1 resistance to disease

2 amount of vitamins contained

[2]

(iii) In a recent survey **200** people were asked about GM crops.

The people surveyed were shown six statements. Three were negative statements and three were positive statements.

They were asked to choose **one** statement they agreed with.

These are the results.

	Statement	Number of people choosing statement
Negative	GM crops are not safe enough to use.	42
	Growing GM crops does more harm than good.	32
	Growing GM crops tampers with nature.	22
Positive	Growing GM crops can prevent people being hungry.	35
	Eating GM crops has very little risk to consumers.	35
	Growing GM crops can make food more nutritious.	34

Calculate the percentage of people in the survey that have a **negative** opinion of genetic modification.

$$42 + 32 + 22 = 96$$
$$\frac{96}{200} \times 100 = 48\%$$

Percentage =% $\frac{48}{100}$

[2]

Total Marks for Question Set 18: 7

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