Biotechnology and genetic modification – 2021 O Level 5090

Nov/2021/Paper 11/No.40

What is an advantage of genetic engineering?

- genes spreading to nearby organisms Α
- В reduced use of insecticides
- С reduction in biodiversity
- unexpected side effects in organisms
- 2. Jun/2021/Paper 11/No.27

Bacteria are involved in the manufacture of which product?

- alcohol Α
- В bread
- **C** yoghurt
- **D** penicillin
- 3. Jun/2021/Paper 12/No.40

Some stages in the production of human insulin are listed.

- Genetically modified *E. coli* bacteria are grown in large fermenters.
- 2 The gene for human insulin is inserted into the DNA of a bacterium called E. coli.
- 3 The gene for human insulin is obtained from human pancreas cells.
- Human insulin is extracted and purified.

What is the correct sequence of these stages?

- **A** $3 \rightarrow 1 \rightarrow 2 \rightarrow 4$
- $\textbf{B} \quad 4 \rightarrow 3 \rightarrow 2 \rightarrow 1$
- C $3 \rightarrow 2 \rightarrow 4 \rightarrow 1$
- **D** $3 \rightarrow 2 \rightarrow 1 \rightarrow 4$