

**National 5 Biology**

**Genetic Engineering**

1. What do we mean by the term 'genetic engineering'? (1)
2. Write down one way DNA can be transferred naturally between species. (1)
3. Put the following stages of genetic engineering into the correct order. (2)
  - A- Insert plasmid into host cell.
  - B- Extract required gene.
  - C- Allow the modified cell to reproduce and produce the required protein.
  - D- Identify the required gene.
  - E- Insert required gene into the bacterial plasmid.
4. Give an example of a protein which is produced by genetic engineering and write down what it would be used for. (2)
5. Why do we use bacteria for the purposes of genetic engineering? (2)
6. There are people who do not agree with genetic modification. Write down one argument for it and one argument against it. (2)

(2)  
**Total - 10**