

1. **Nov/2023 /Paper_ 0610/13/No.39**

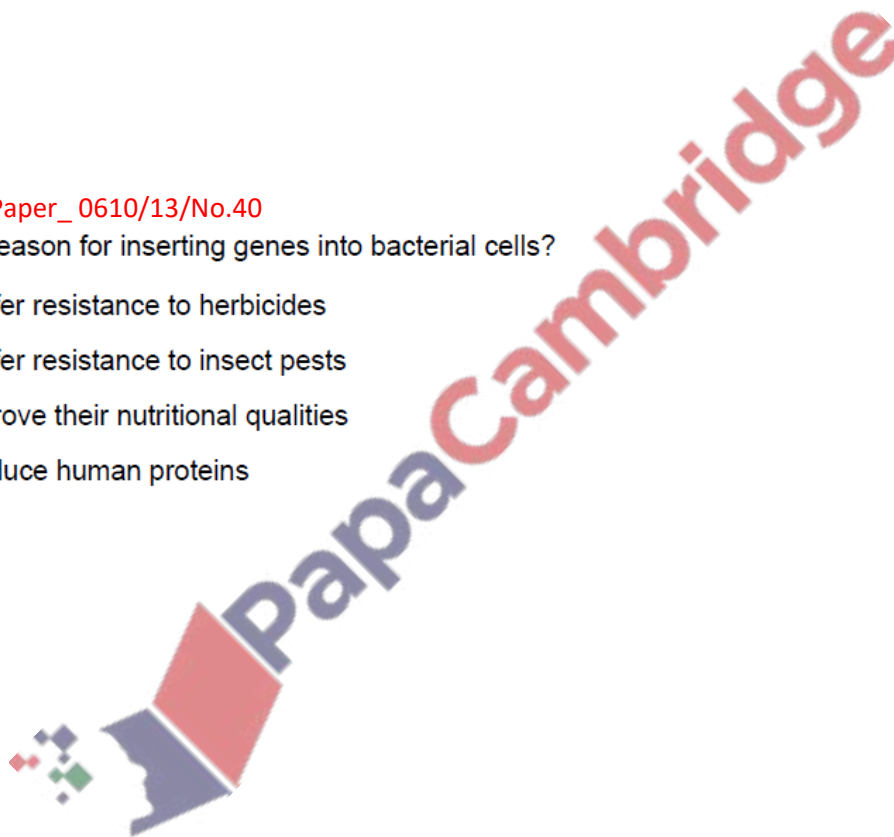
Which product is made using an enzyme rather than bacteria or fungi?

- A insulin
- B penicillin
- C lactose-free milk
- D mycoprotein

2. **Nov/2023 /Paper_ 0610/13/No.40**

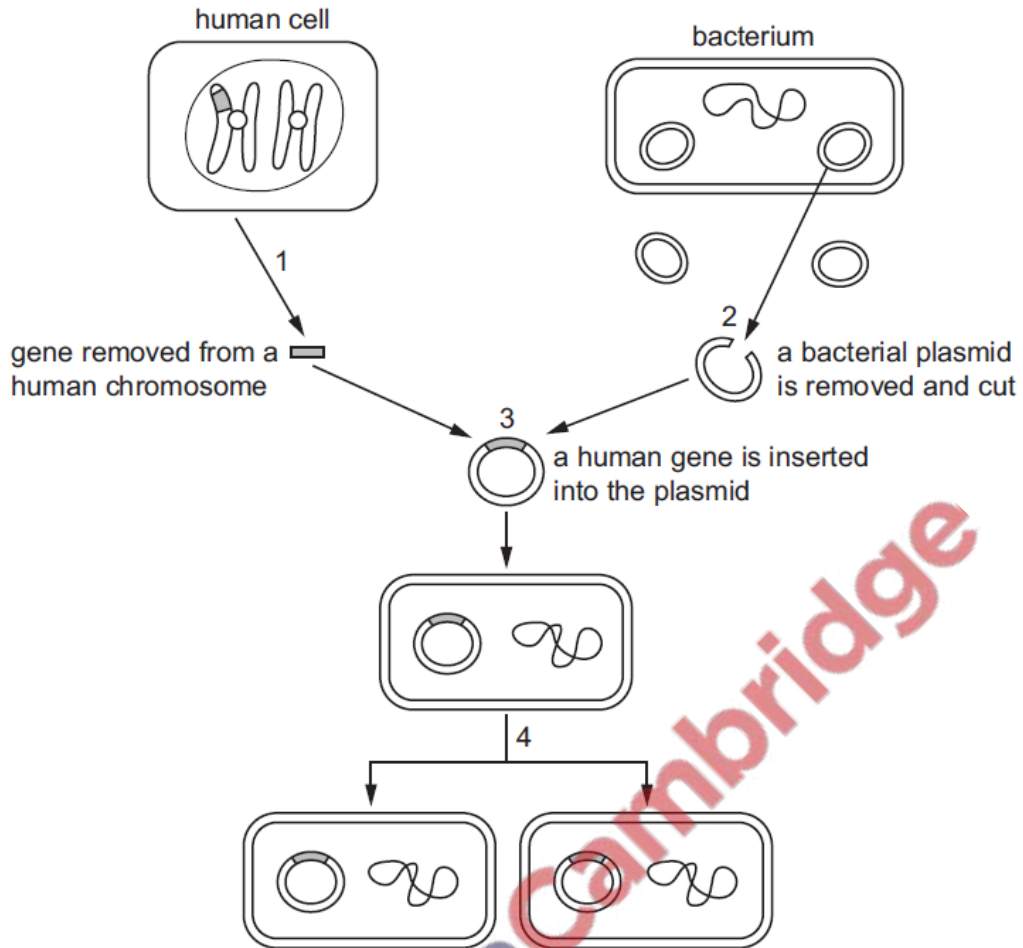
What is a reason for inserting genes into bacterial cells?

- A to confer resistance to herbicides
- B to confer resistance to insect pests
- C to improve their nutritional qualities
- D to produce human proteins



3. Nov/2023 /Paper_0610/22/No.40

The diagram shows how a human gene can be inserted into a bacterium.



Which row shows the correct processes at 1, 2, 3 and 4?

| | using restriction enzymes | using ligase enzymes | multiplication of bacteria |
|----------|---------------------------|----------------------|----------------------------|
| A | 1 | 2 | 3 |
| B | 1 and 2 | 3 | 4 |
| C | 1 and 3 | 2 | 4 |
| D | 4 | 1 and 2 | 3 |

4. Nov/2023 /Paper_ 0610/23/No.39

Which statement is an advantage of genetically modifying crops?

- A Less pesticide is used if the genetically modified crop is resistant to pests.
- B More herbicide is used if the genetically modified crop is resistant to herbicide.
- C Seeds for genetically modified crops are more expensive.
- D The genetically modified crop genes may be passed to other plants.

5. Nov/2023 /Paper_ 0610/23/No.40

Which statements are correct descriptions of parts of the process of protein synthesis?

- 1 Amino acids are made by the ribosomes.
- 2 mRNA is copied.
- 3 The gene coding for the protein moves into the nucleus.
- 4 The ribosome assembles the amino acids into protein molecules.
- 5 The sequence of amino acids is determined by the sequence of bases in the mRNA.

- A 1, 2, 3, 4 and 5
- B 1, 3 and 4 only
- C 2, 3 and 5 only
- D 4 and 5 only