

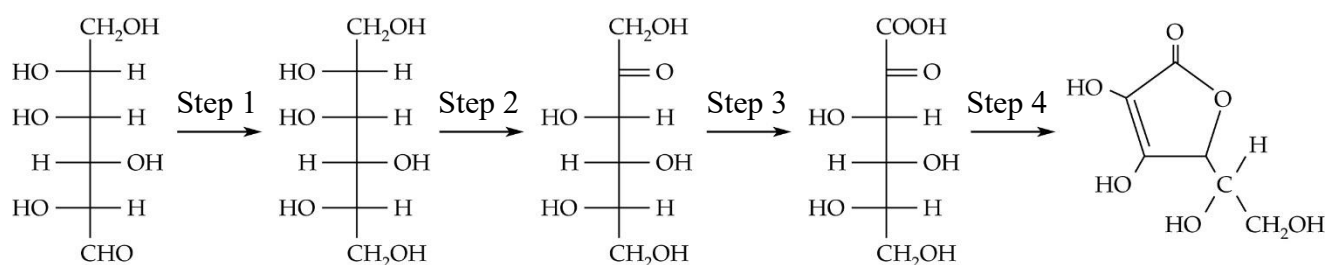
Summary Quiz (Chapter 41)

Section A: Multiple Choice

- Which of the following items is NOT a product of petrochemical-based plastic?
 - Expanded polystyrene foam cups
 - Polyethene food wrap
 - PVC-made disposable syringes
 - Polylactide food containers
- What is the natural raw material for the manufacture of polyvinyl chloride?
 - Chlorine
 - Natural gas
 - Petroleum
 - Vinyl chloride
- Which of the following CANNOT be used as the natural raw materials for the Haber process?
 - Air
 - Haematite
 - Natural gas
 - Sea water
- Which of the following are natural raw materials used to make petrochemicals?
 - Crude oil
 - Natural gas
 - Gasoline
 - (1) and (2) only
 - (1) and (3) only
 - (2) and (3) only
 - (1), (2) and (3)
- Which of the following is a bulk chemical used to produce soapy detergent?
 - Animal fats
 - Petroleum
 - Sodium hydroxide
 - Sulphuric acid
- Electrolysis of concentrated sodium chloride solution gives sodium hydroxide solution, chlorine and hydrogen. Then chlorine is passed into sodium hydroxide solution to form household bleach. Which of the following combinations about the manufacture of household bleach is correct?

	<u>Raw material(s) used</u>	<u>Bulk chemical(s) used</u>
A.	NaOH + Cl ₂	NaClO
B.	NaCl + Cl ₂ + H ₂	NaClO
C.	NaCl + H ₂ O	NaOH + Cl ₂
D.	NaCl + H ₂ O	NaOH + H ₂

Questions 7 and 8 refer to the Reichstein process. The process is shown below.

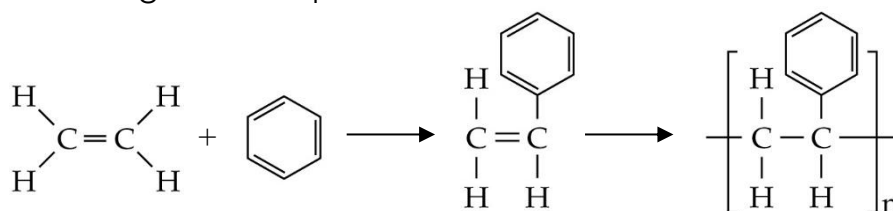


- Which of the steps is a reduction process?
 - Step 1
 - Step 2
 - Step 3
 - Step 4

8. Which of the following statements about the Reichstein process is INCORRECT?
- It is used for the production of ascorbic acid.
 - Glucose is used as the starting material for the process.
 - Fermentation is involved in the process.
 - It is an example of the petrochemical industry.

Section B: Structural Question

Consider the following industrial process:



- State the natural raw material for the above process.
- Name the bulk chemicals in the above process.
- State TWO uses of the synthetic product produced in the above process.
- Give ONE advantage and ONE disadvantage of using the above process for manufacturing the synthetic product.

The End

Suggested Answer**Section A**

1.	D	5.	C
2.	C	6.	C
3.	B	7.	A
4.	A	8.	D

Section B

(a) Petroleum

(b) Benzene
Ethene

(c) Any TWO:

To make 'see through' containers / compact disc cases / packaging / lightweight ceiling tiles / disposable foam cups and food boxes

(d) Advantages: (any ONE)

It attracts overseas or local investments to the society / the setting up of chemical plants creates job opportunities for local people / the traffic network improves the infrastructure of the community / the taxes collected from the industry generates income for the government.

Disadvantages: (any ONE)

The chemical plants generate harmful or toxic wastes / the cost for pollution control is high.

The End