

Name

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Part A
(Objective Types)

- ① High boiling point
- ② Grease
- ③ Hydrocarbon oil
- ④ ~~Emulsions~~ 98%
- ⑤ Emulsions
- ⑥ 40 to 50%
- ⑦ Acids
- ⑧ increases
- ⑨ electrolysis
- ⑩ Conductance cell

QNo: → 02

part (A)

Ans: → The process of joining small molecules to form a large molecule is known as polymerization. The building blocks of polymers are monomers. Based on the chemical reaction involved, polymerisation is divided into two groups known as addition polymerization and condensation polymerization. Addition polymerization is the process of repeated addition of monomers that ~~passes~~ passes double or triple bonds to form polymers. A condensation polymerization is a process that involves repeated condensation reactions between two different bi-functional or tri-functional monomers. Give below in a tabular column is the difference between addition and condensation polymerization.

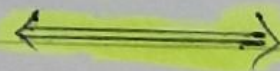
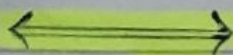
Addition polymerization

- ① Monomers must have either a double bond or triple bond.

Condensation polymerization

Monomers must have two similar or different functional groups.

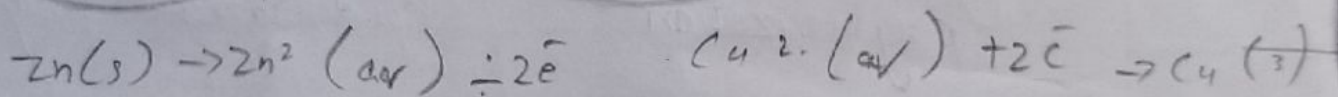
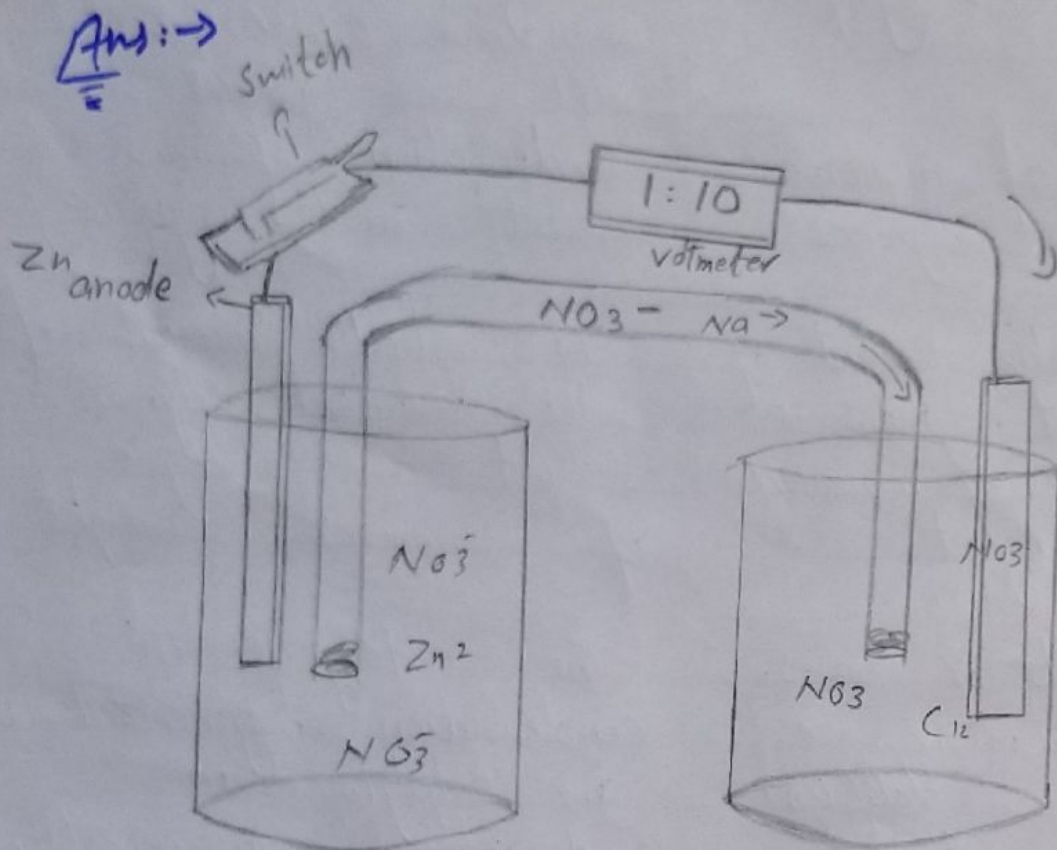
- | | |
|--|--|
| ② produces no by-product | By-products such as ammonia, water and HCl are produced. |
| ③ Addition of monomers results in polymers | condensation of monomers result in polymers. |
| ④ The molecular weight of the resultant polymers is a multiple of monomer's molecular weight | The molecular weight of the resultant polymer is not a multiple of monomer's weight |
| ⑤ Lewis acids or bases, radical initiators are catalysts in addition polymerization | The catalysts in condensation polymerization are catalysts in condensation polymerization. |
| ⑥ Common examples of addition polymerization are PVC, polyethylene, Teflon etc. | Common examples of condensation polymerization are nylon, bakelite, silicon etc. |



Q No: → 2

part (B)

page No# 03



movement of cations

Movement of anions

Q No :-> 03

A liquid crystal is a state of matter between liquid and solid (a "mesophase") - - - - - liquid

Crystal are composed of organic rod-shaped molecules that align in parallel, and the common types used in electronic displays are nematic, cholesteric and smectic. See LCD, LCD types and LCD categories.

Liquid can flow and assume the shape of their container.

★ water

★ Bromine (an element)

★ Milk

★ Wine

★ Blood

★ Urine

★ Gasoline

★ Mercury (an element)

Q No :-> 04

Part (A)

Ans:-> Suspension polymerization is a heterogeneous radical polymerization process that uses mechanical agitation to mix a monomer or mixture of monomers in a liquid phase, such as water, while the monomers polymerize, forming spheres of polymer.

(part B)

The band structures of conductive polymers can easily be calculated with a tight binding model. In principle, these same materials can be doped by reduction, which adds electrons to an otherwise unfilled band. In practice, most organic conductors are doped relatively to give p-type materials.

QNO :-> 05

Ans :->

Dielectric constant of gases passes each other... very close

Does it reflect that all gases are easy to polarize when exposed to external electric field (the reason of it stems from the gas molecules which are not closely packed, and can align & orient rather easily on a little expense of electric field.

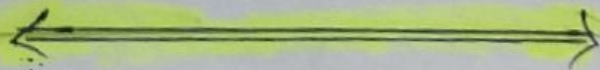


~~Ans No~~

Q No :-> 06

Ans :-> A primary cell is a battery that is designed to be used once discarded, and not recharged with electricity and reused like a secondary cell. In general, the electrochemical reaction occurring in the cell is not reversible, rendering the cell un rechargeable.

The Dry cell was discovered by French Scientist G. Leclanche in 1868. It is the most common cell which is the improved version of Leclanche cell. It is portable cell and free from liquid. This is why, it is called dry cell as it do not contain any liquid. Dry cell is widely used in our day to day life in torch, clock, toys etc.



ANS

Q No :-> 07

Ans :-> Tidal power or tidal energy is the form of hydropower that converts the energy obtained from tides into useful power, mainly electricity. Although not yet widely used, tidal energy has the potential for future electricity generation.

Tides are more predictable than the wind and sun.

Barrages can be constructed across tidal rivers, bays, and estuaries. **Turbines** inside the barrage harness the power of tides the same way a river dam harnesses the power of a river. The barrage gates are open as the tides rises. At high tide, the barrage gates close, creating a pool, or tidal lagoon.