Chemistry QB (Points)

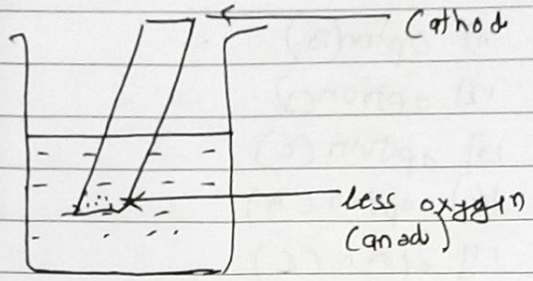
1] option(A-)
2] option(A)
3] option(C)
4] Option(C)
5] option(D)
6] option(C)
7] option(A)
8] option(B)
9] option(B)
10] Option(B)
11] Option(B)
12] option(C)
13] option(C)
14] option(A)
15] option(C)
16] option(A)
17] option(A)
18] option(D)
19] option(C)
20] option(C)

Q2] ⇒ Absorbtion spectroscopy (28)
→ Defination (absorbtion of radition = f(λ))
⇒ Type of Spectroscopy
→ Absorbtion
→ Emission
→ Scattering
⇒ Type of absorbtional spectroscopy
→ Rotational → Vibrational → Electronic → NMR.

Q3] ⇒ Conventional synthesis
→ Green synthesis
⇒ principle

N 60

4]

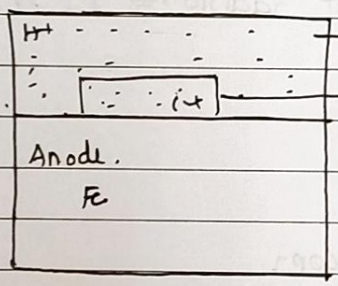


N 46

→ Due to difference in the concentration of oxygen
→ Reaction : Anode : Cathode:
→ Most common.
→ Rate ∝ Cathodic area.

5] → Conducting liquit.
→ H_2 emission.

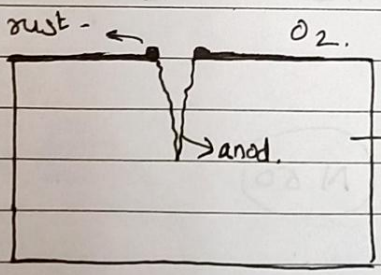
N 37 + 36



A: $Fe \longrightarrow Fe^{2+} + 2e^-$

C: $2H^+ + 2e^- \longrightarrow H_2 \uparrow$

→



A: $Fe \longrightarrow Fe^{2+} + 2e^-$

C = $\frac{1}{2} O_2 + H_2O + 2e \longrightarrow 2OH^-$

7] Andic > Cathodic

N 50 51

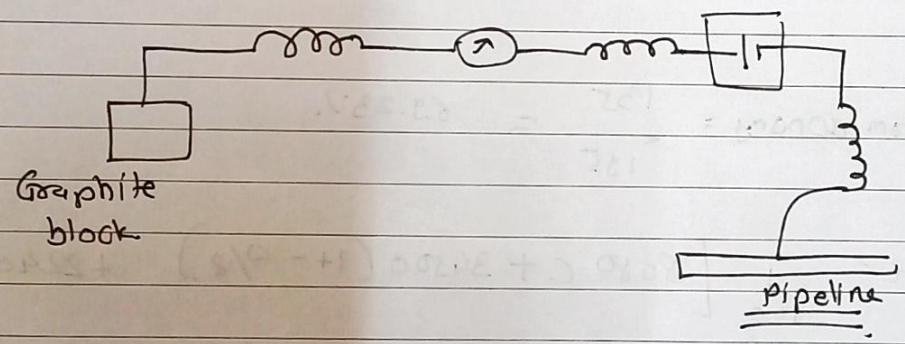
N58

8] 12 Principles

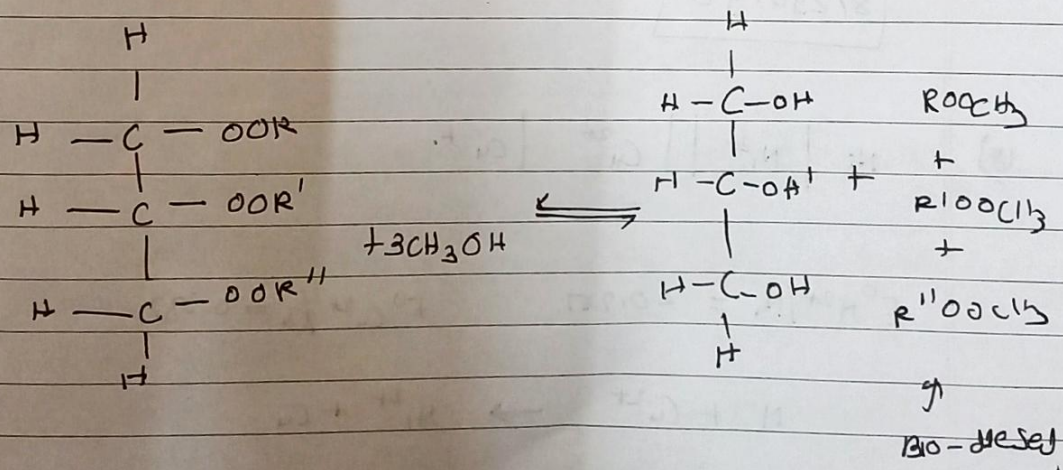
→ Prven waste → safer → Avoid derivativ → prev poll
→ atom economy → efficient → Catalyst. → avoid acc
→ less hazardous → renewable → degradable → safer condi

9] → To force the method to be protected behave like. cathode
→ Sacrificial + impressed
→ impressed

N49



11]



N64

12] N-45 (54)

13] N-34

14] N42 + 43

15] N9 to N8

Numericals

MCQ 10] Atom economy = $\frac{135}{195}$ = 69.23%.

15] GC = $\frac{1}{100}$ [8080 C + 34500 (1+ - 0/8) + 2240 (5)]

87290.90

18] Ni | Ni^{2+} || Cu^{2+} | Cu

$E^{\circ}_{Ni^{2+}/Ni} = -0.257$ $E^{\circ}_{Cu^{2+}/Cu} = 0.337$

$Ni + Cu^{2+} \rightarrow Ni^{2+} + Cu$

$E = 0.337 - (-0.257)$

$= 0.337 + 0.257$

$= 0.594$

2] $E = E_0 - \frac{0.0591}{n} \log \left[\frac{P_{Mg}}{P_{Cu}}\right]$

$Mg + Cu^{2+} \longrightarrow Mg^{2+} + Cu$

$E_0 = 0.34 + 2.37$

$= 2.71$

$= 2.71 - \frac{0.051}{2} \log \left[\frac{10^{-3}}{10^{-4}}\right]$

$= 2.71 - \frac{0.0591}{2} \times 3$

$= 2.6805.$

5] $C + O_2 \rightarrow CO_2$ $\quad \frac{0.80}{12} \times 32 = 2.13$

$H_2 + \frac{1}{2}O_2 \rightarrow H_2O$ $\quad \frac{0.05 \times 16}{2} = 0.4.$

$S + O_2 \rightarrow SO_2.$ $\quad \frac{0.05 \times 32}{32} = 0.05.$

$\therefore \quad 2.52 - 0.01$

$= 2.51$

$\therefore$ ~~Vol.~~ of air $= \frac{2.51 \times 100}{23} \times 10 = 111.7$ ~~kg~~

Vol ~~of~~ $= \frac{22.4 \times 111.7}{28.94} = 8.64 \times 10 = 86.4\ m^3$

12] $\therefore C = \frac{0.3 \times 12 \times 100}{0.25 \times 44}$

$= 87.2$

$\therefore H = \frac{0.09 \times 2 \times 100}{0.25 \times 18}$

$= 4$

$\therefore N = \frac{13 \times 0.12 \times 1.4}{0.42}$

$= \boxed{5.2}$

Q13] $Hc = \frac{1}{100}(8080(85) + 3480(6-8) + 2840(05))$

$= 8404.2$

$LCH = 8404.2 - [0.09 \times 6 \times 587]$

$= 8287.22$ J.

15] $H_2 + \frac{1}{2}O_2 \rightarrow H_2O$ $\quad \frac{1}{2} \times 0.10 = 0.05$

$CH_4 + 2O_2 \rightarrow CO_2 + 2H_2O$ $\quad 2 \times 0.16 = 0.32$

$C_2H_6 + 7O_2 \rightarrow 2CO_2 + 3H_2O$ $\quad 7/2 \times 0.20 \times 0.?$

$CO + \frac{1}{2}O_2 \rightarrow CO_2$ $\quad 1/2 \times 0.22 \times 0.1!$

$1.18 - 0.08$

$= 1.1$

$V = \frac{1.1 \times 100}{21} = 5.238$

$\therefore$ 52.38 m^3