

**FACULTY OF ENGINEERING AND TECHNOLOGY**  
**CHEMISTRY FINAL EXAM 2 MARKS QUESTIONS & ANSWERS**

**Answers The Following Question :**

**Module : 01**

Q1 : Define Electrode Potential ?

Ans : The Potential Developed When A Metal Is In Equilibrium With A Solution Of Its Own Ions Is Called Electrode Potential .

Ex : Zinc Electrode Dipped In  $ZnSO_4$  Solution

Where  $Zn^{2+}$  Are In Equilibrium With Zinc Electrode .

Q2 : Define Electrochemistry With An Example ?

Ans : It Is A Branch Of Chemistry Which Deals With The Study Of Interfacial Exchange Of Electricity And Matter .

Ex : Daniell Cell .

Chemical Energy Converted Into Electrical Energy .

Q3 : Define Emf & Give The Equation For Emf Or  $E_{cell}$  ?

Ans : The Force Which Causes The Flow Of Electrons From One Electrode To The Other Electrode And Thus Result In The Flow Of Current Is Called Emf And It Is Measured In Volts.

$E_{cell} = E_{cathode} - E_{anode}$  .

Q4 : Define Reference Electrode With Suitable Example ?

Ans : These Are The Electrode Of Constant Potential With Which The Electrode Potential Of Other Electrode Can Be Measured .

Ex : Calomel Electrode .

Q5 : Define Battery With An Example ?

Ans : When Two Or More Cells Connected In Series Or Parallel Are Called As Battery .

Ex : Zn – Air Battery , Ni-Mh Battery Etc .

Q6 : Define Shelf Life & Cycle Life ?

Ans : Shelf Life : The Duration Of Storage Under Specified Condition At The End Of Which A Battery Remains The Ability To Give Specified Performance .

Cycle Life : It Is The Number Of Times A Battery That Can Be Charged & Discharged Before Failure .

**Module : 02**

Q1 : Define Scale And Sludge Formation ?



Ans : In Boiler Water Is Heated Under High Pressure To High Temperature The Impurities In Water Gets Progressively Concentrated Inside The Boiler . These Impurities Get Precipitated Out On Saturation . If The Resultant Ppt Is Thick Deposit Is Called Scale And If Ppt Is Loosely Held Known As Sludge .

Q2 : What Is Priming And Foaming ?

Ans : Priming : It Is The Process Of Very Rapidly Boiling Of Water In The Boiler Which Makes Same Water Droplets To Be Carried Away Along With Steam In The Form Of Spray Into The Steam Outlet .

Foaming : It Is The Formation Of Small Persistent Bubbles On The Surface Of Boiler Water . These Bubbles Are Carried Along With Steam Leading To The Excessive Priming .

Q3 : Define Dissolved Oxygen ?

Ans : It Refers To The Amount Of Oxygen Gas Dissolved In Water , This Oxygen Is Essential For Aquatic Life And Plays A Vital Role In Health Of Water Ecosystem DO Is Measured As The Concentration Of Oxygen In Water .

Q4 : Define Chemical Oxygen Demand ?

Ans : It Is Defined As The Amount Of Oxygen Used While Oxidizing The Total Organic Load Of The Sample With A Strong Chemical Oxidant Potassium Dichromate In A Acid Medium . It Is Represented As  $\text{Mg/Dm}^3$  .

Q5 : Define Desalination ?

Ans : It Is The Process To Remove The Excess Salts From Saline Water So That It Is Fit For Drinking .

Q6 : What Is Electro Dialysis ?

Ans : The Process Of Decreasing The Concentration Of Salt In Saline Water Using Ion Selective Membrane Under The Influence Of An Applied Emf Is Called Electrodialysis .

### Module : 03

Q1 : What Is Corrosion Give An Example ?

Ans : It Is The Process Of Detonation Of A Metal/Alloy From Its Surface Due To The Unwanted Chemical Or Electrochemical Interaction Of Metal/Alloy With Its Environment .

Ex : Formation Of A Layer Of Reddish Scale Of Hydrated Ferric Oxide On The Surface Of Iron .

Q2 : Define Sacrificial Anode ?

Ans : It Is The Method The Metal Article To Be Protected Is Converted Into Cathode By Connecting Into More Active Metal Active Metals Like Zn, Mg And Al And Their Alloys Can Be Used As Anodes .

Q3 : Define Metal Finishing With Suitable Example ?

Shaik Rehan



Ans : Metal Finishing Is Name Given ToAn Those Process Employed To Modify The Surface Properties Of Metal And Non-Metals By Depositing A Layer Of Metal Over Them .

Ex : Electroplating Of Gold Nickel Etc .

Q4 : Define Cathode Protection ?

Ans : It Is A Method Of Protecting Metal Alloy From Corrosion By Converting It Completely Into Cathode And No Part Of It Is Allowed To Act AsAnode .

Q5 : Define Impressed Current Metal ?

Ans : In This Method The Cathodic Protection Give To Corrosion Prone Objects By Applying Direct Current Layer Then The Corrosion Current Protected Part Of Metal Is Made Cathodic By Passing Current .

#### **Module : 04**

Q1 : What Is A Fuel And Give AnExample ?

Ans : Fuel Is A Combustible Substance Containing Carbon As Main Constituent Which On Proper Burning Gives Large Amount OfHeat . Which Can Be Used Economically For Domestic And Industrial Purpose .

Ex :Wood ,Charcoal ,Petrol ,Diesel ,LPG , CNG Etc .

Q2 : What Is Cracking ?

Ans : It Is Defined AsThe Decomposition Of Higher Hydrocarbon Molecules Into Simple Low Boiling Hydrocarbon Of Lower Molecular Weight .

Q3 : Define Octane Number ?

Ans : The Resistant To Knocking Of Farad By Petrol Is Expressed In Terms Of A Arbitrary Scale It Is The Percentage By Volume Of Iso Octane Present InA Mature Of Iso Octane And N-Heptane Which Has The Same Knocking Characteristics AsThe Fuel Under Test .

Q4 : What Is Knocking ?

Ans : It Is The Production Of Shock Wave In Internal Combustion Engine AsA Result OfAn Explosive Combustion OfA Fuel Air Mixture Due To An Increase InThe Compression Ratio Beyond A Certain Value Leading To Rattling Sound .

Q5 : Define Fuel Cell WithAnExample ?

Ans : These Are Galvanic Cell Which Convert The Free Energy OfThe Electrochemical Reaction Of Fuel Oxidant System Directly Into Electrical Energy .

#### **Module : 05**

Q1 : Define Cement ?

Ans : It Is A Binding Powder That Never Used Alone But It Is A Component Of Both Concrete And Mortar As Well AsSteel .

Shaik Rehan



Q2 : Define Glass ?

Ans : It Is An Inorganic Solid Material That Is Usually Transparent And Hard Brittle & Impressive To The Natural Elements .

Q3 : Define Refractories ?

Ans : It Is A Non Inorganic Non-Metallic Material That Can With Stand High Temperature Without Undergoing Physical Chemical Changes While In Contact With Molten Strong Metal And Gases .

Q4 : What Are The Cement Compositions ?

Ans : It Has Closely Controlled Chemical Combination Of Calcium , Silicon , Aluminium , Iron And Other Ingredients Common Material Used To Manufacture Cement Includes Stone , Shells And Chalk .

Q5 : Define Portland Cement ?

Ans : The Name Portland Cement Is Used Because This Powder On Mixing With Water Gives A Hard Stone Like Mass Which Resembles Portland Rock . It Is Widely Used A Non-Metallic Material In Constructions .