VELLORE DISTRICT
SLIP TEST –1A

CLASS : XII **ATOMIC STRUCTURE-II** **MARKS : 25**

I. Answer in one or two sentences **3X 2 =6**

1) State Heisenberg's Uncertainty principle. (Page :10)
2) Why He_2 is not formed? (Page :20)
3) Define Hybridization. (Page :23)

II. Answer briefly: **3X 3=9**

4) Derive de-Broglie's equation. What is its significance? (Page :5,6)
5) Explain the types of Hydrogen Bonding. (Page :27)
6) Calculate the uncertainty in the position of an electron, if the uncertainty in its velocity is $5.7x10^5$ m/s. (Page :11)

III. Answer in paragraph **2 X 5 = 10**

7) Explain the postulates of Molecular Orbital Theory. (Page :17)
8) Explain the formation of Nitrogen molecule (N_2) by molecular orbital theory. (Page :23)

VELLORE DISTRICT
SLIP TEST –1B

CLASS : XII **ATOMIC STRUCTURE-II** **MARKS : 25**

I. Answer in one or two sentences **3X 2 =6**

1) What is the significance of Negative electron energy? (Page :13)
2) Define an Orbital (Page :15)
3) Define Bond Order. (Page :19)

II. Answer briefly: **3X 3=9**

4) Discuss the Davison and Germer's experiment. (Page :3)
5) Differentiate between Particle and Wave. (Page : 3)
6) List the uses of Hydrogen bonding. (Page :29)

III. Answer in paragraph **2 X 5 = 10**

7) Explain the formation of Oxygen molecule (O_2) by molecular orbital theory. (Page :23)
8) a. Calculate the uncertainty in velocity (Δv) of a cricket ball of mass 0.15Kg, if the uncertainty in position (Δx) is of the order $1A^o$(3) (Page : 12)
   b. The velocity of oxygen molecule is 660 m s^{-1}. Calculate its de-Broglie wave length.(2) (Page : 10)

VELLORE DISTRICT
SLIP TEST –2A

CLASS : XII **PERIODIC CLASSIFICATION -II** **MARKS : 25**

I. Answer in one or two sentences **3X 2 =6**

1) If $d_{Si-C} = 1.93A^0$, calculate the radius of Si atom. (Page : 34)
2) Ionization energy of Fluorine is greater than Oxygen. Why? (Page : 39)
3) What is Electron Affinity? Explain its periodicity. (Page : 32)

II. Answer any three questions: **3X 3=9**

4) Explain the factors affecting Electron Affinity? (Page : 41)
5) Calculate the effective nuclear charge of the last electron in an atom whose configuration is $(1S^2)(2S^2,2P^6)(3S^2,3P^5)$ (Page : 36)
6) Explain Milliken's scale of determination of Electronegativity.(3) (Page : 44)

III. Answer in paragraph **2 X 5 = 10**

7) Explain Pauling's method to determine ionic radii. (Page : 34)
8) (a) What is Electronegativity? Explain its periodicity.(3)(Page: 32)
   (b) Ionization energy of Ne is greater than F. Why?(2) (Page : 40)

VELLORE DISTRICT
SLIP TEST –2B

CLASS : XII **PERIODIC CLASSIFICATION -II** **MARKS : 25**

I. Answer in one or two sentences **3X 2 =6**

1) Calculate the effective nuclear charge experienced by the 4s electron in potassium atom. (Page : 36)
2) First Ionization energy of Mg is greater than Al. Why? (Page : 39)
3) Why Electron affinity of Fluorine is less than Chlorine? (Page :42)

II. Answer any three questions: **3X 3=9**

4) Explain the factors affecting Ionization energy? (Page : 38)
5) Explain Pauling's method of determination of Electronegativity. (Page : 43)
6) What is ionic radius? Explain its periodicity. (Page : 31)

III. Answer in paragraph **2 X 5 = 10**

7) a. Write a note on slater rules (Page : 35)
   b. Mention the disadvantages of Pauling and Milliken's scales.(2) (Page : 44)
8) a. How electronegativity values are helpful to find out the nature of bonding between the atoms.(3) (Page : 45)
   b. Calculate the electronegativity of chlorine from the following data (2) (Page : 43)
   $E_{H-H} = 104\ KCal\ mol^{-1}$;
   $E_{Cl-Cl} = 36\ KCal\ mol^{-1}$;
   $E_{H-Cl} = 134\ KCal\ mol^{-1}$

VELLORE DISTRICT
SLIP TEST –3A

CLASS : XII **P-BLOCK ELEMENTS** **MARKS : 25**

I. Answer in one or two sentences **3X 2 =6**

1) What is inert pair effect? (Page : 49)
2) What is Plumbo Solvency? (Page : 54,55)
3) Show that phosphorus acid is dibasic (or) diprotic. (Page : 60)

II. Answer any three questions: **3X 3=9**

4) Give the laboratory preparation of phosphine. (Page : 63)
5) Explain the structures of Inter Halogen compounds of type AX_5 and AX_7. (Page : 72)
6) Describe in detail how Noble gas mixture is isolated from Air by Ramsay Raleigh's method? (Page : 74)

III. Answer in paragraph **2 X 5 = 10**

7) What are Silicones? How they are prepared? (Page : 51)
8) a. List the uses of Neon.(2) (Page : 76)
   b. Explain how noble gases are separated from the mixture by Dewar's method.(3) (Page : 75)

VELLORE DISTRICT
SLIP TEST –3B

CLASS : XII **P-BLOCK ELEMENTS** **MARKS : 25**

I. Answer in one or two sentences **3X 2 =6**

1) How is Potash alum manufactured? (Page : 50)
2) Show that P_2O_5 is a very good dehydrating agent. (Page : 60)
3) Show that phosphorus acid is a good reducing agent.(Page : 60)

II. Answer any three questions: **3X 3=9**

4) Write a note on Etching of glass by HF. (Page : 67)
5) How is Fluorine isolated by Dennis method? (Page : 68)
6) List the used of silicones. (Page : 52)

III. Answer in paragraph **2 X 5 = 10**

7) Explain how is lead is extracted from its ore? (Page : 52)
8) a. How is Ortho phosphoric acid prepared in the laboratory?(3) (Page : 61)
   b. Show that phosphoric acid is Tribasic. (2) (Page : 61)

VELLORE DISTRICT
SLIP TEST –4A

CLASS : XII **d-BLOCK ELEMENTS** **MARKS : 25**

I. Answer in one or two sentences **3X 2 =6**

1) Why'd' block elements exhibit variable oxidation state? Explain. (Page : 84)
2) Most of'd' block metals and their complexes are catalysts. Account. (Page : 83)
3) how is Zinc carbonate prepared? (Page : 103)

II. Answer any three questions: **3X 3=9**

4) How is Chromium extracted from Chromite ore? (Page : 89)
5) Write a note on Chrome Plating. (Page : 92)
6) Discuss the action of heat on Copper sulphate Crystals. (Page : 88)

III. Answer in paragraph **2 X 5 = 10**

7) a. List the alloys of Chromium .write their composition and uses.(2) (Page : 92)
   b. How is Zinc extracted from its ore?(3) (Page : 93)
8) a. How is Silver extracted from its ore?(3) (Page : 95)
   b. What is spitting of Silver?(2) (Page : 96)

VELLORE DISTRICT
SLIP TEST –4B

CLASS : XII **d -BLOCK ELEMENTS** **MARKS : 25**

I. Answer in one or two sentences **3X 2 =6**

1) Why do transition elements form complexes? (Page : 85)
2) Why do 'd' block elements form coloured ions ?Explain. (Page : 82)
3) The number of unpaired electrons in Ti^{3+} ion is 1.Calculate its magnetic moment. (Page : 85)

II. Answer any three questions: **3X 3=9**

4) Write a note on Aluminothermic Process. (Page : 90)
5) How is gold extracted from its ore? (Page : 97)
6) Write a note on Purple of Cassius. (Page : 98)

III. Answer in paragraph **2 X 5 = 10**

7) a. What is philosopher's wool?How is it prepared?(2)(Page : 94)
   b. Discuss the Oxidizing nature of $K_2Cr_2O_7$.(3) (Page : 100)
8) a. Explain the reaction of Gold with Aqua Regia.(2) (Page : 98)
   b. How is $K_2Cr_2O_7$ prepared from Chromite ore?(3) (Page : 99)

VELLORE DISTRICT
SLIP TEST –5

CLASS : XII **f-BLOCK ELEMENTS** **MARKS : 25**

I. Answer in one or two sentences 3X 2 =6

1) What is Lanthanide Contraction? (Page : 109)
2) List the uses of actinides. (Page : 113)
3) what are inner transition elements? (Page : 109)

II. Answer any three questions: 3X 3=9

4) Describe the extraction of Lanthanides from Monazite sand. (Page : 111)
5) What are mish metals? Write their composition and uses. (Page : 112)
6) Explain its consequences of lanthanide contraction. (Page : 110)

III. Answer in paragraph 2 X 5 = 10

7) Differentiate between lanthanides and actinides (Page : 112)
8) a. Write the general electronic configurations of lanthanides and actinides.(2) (Page : 109)
   b. Write a note on oxidation states of lanthanides. (Page : 109)

VELLORE DISTRICT
SLIP TEST –9

CLASS : XII **THERMODYNAMICS -II** **MARKS : 25**

I. Answer in one or two sentences 3X 2 =6

1) What is entropy? What are the units of it? (Page : 168)
2) What is Trouton's law? (Page : 170)
3) When does entropy increases in a process? (Page : 173)

II. Answer any three questions: 3X 3=9

4) What kind of liquids show deviation from Trouton's rule? (Page : 170)
5) List the characteristics of Free energy (G). (Page : 175)
6) What are the conditions for spontaneity of a process? (Page : 176)

III. Answer in paragraph 2 X 5 = 10

7) List the characteristics of entropy (S) (Page : 169,170)
8) State the various statements of second law of thermodynamics. (Page : 168)

VELLORE DISTRICT
SLIP TEST –6A

CLASS : XII **COORDINATION CHEMISTRY** **MARKS : 25**

I. Answer in one or two sentences **3X 2 =6**

1) Explain the term " central metal ion". (Page : 117)
2) What is coordination number? (Page : 118)
3) Give two examples for both positive and negative ligands. (Page : 117)

II. Answer any three questions: **3X 3=9**

4) Calculate the magnetic moment of the complex $[Ni(NH3)_4]^{2+}$.
5) Explain the postulates of Werner's theory. (Page : 125,126)
6) Write the a) Name b) Central metal ion c) Ligands present in $[Co(en)_3]\ (NO_2)_3$

III. Answer in paragraph **2 X 5 = 10**

7) Explain the types of structural isomerism in coordination complexes. (Page : 121,122,123)
8) How is the paramagnetic moment related to the number of unpaired electrons in?
   a.$K_4[Fe(CN)_6]$ b.$K_3[Fe(CN)_6]$ (Page : 134)

VELLORE DISTRICT
SLIP TEST –6B

CLASS : XII **COORDINATION CHEMISTRY** **MARKS : 25**

I. Answer in one or two sentences **3X 2 =6**

1) What are double salts ? (Page : 115)
2) Explain the term COORDINATION SPHERE (Page : 118)
3) What are chelates? Explain with Example. (Page : 118)

II. Answer any three questions: **3X 3=9**

4) What is photosynthesis? What is the role of chlorophyll in it? (Page : 131,132)
5) Explain the postulates of Valence Bond theory. (Page : 127)
6) By using VBT , Show that $[Ni(CN)_4]^{2-}$ is diamagnetic in nature. (Page : 128)

III. Answer in paragraph **2 X 5 = 10**

7) Mention the type of Hybridization & magnetic properties of $[FeF_6]^{4-}$ and $[Fe(CN)_6]^{4-}$ using VBT. (Page : 134)
8) Explain the structure and Bio-functions of Hemoglobin. (Page : 131)

VELLORE DISTRICT
SLIP TEST –7A

CLASS : XII **NUCLEAR CHEMISTRY** **MARKS : 25**

I. Answer in one or two sentences **3X 2 =6**

1) Define half-life period. (Page : 136)
2) What is nuclear fission reaction? (Page : 139)
3) What is binding energy (BE) of the nucleus? (Page : 137)

II. Answer any three questions: **3X 3=9**

4) Differentiate between nuclear reaction and chemical reactions. (Page : 137)
5) Explain the principle behind the hydrogen bomb. (Page : 141)
6) After 24 hours, only 0.125g out of the initial quantity of 1 g of a radio isotope remains behind. What is its half-life period? (Page : 144)

III. Answer in paragraph **2 X 5 = 10**

7) What is radio carbon dating? Mention its uses. (Page : 141)
8) a. Wooden artefact and freshly cut tree are having 7.6 and 15.2 counts min^{-1} g^{-1} of carbon-14 respectively. Calculate the age of the artefact.(3) (Page : 145)
   b. explain how hydrolysis of esters is studied using labelled oxygen(2) (Page : 142)

VELLORE DISTRICT
SLIP TEST –7B

CLASS : XII **NUCLEAR CHEMISTRY** **MARKS : 25**

I. Answer in one or two sentences **3X 2 =6**

1) Define Radioactivity. (Page : 135)
2) What are Projectile and Ejectile? (Page : 138)
3) Define 'Q' value of a nuclear reaction. (Page : 138,139)

II. Answer any three questions: **3X 3=9**

4) What are nuclear fusion reactions? Give example. (Page : 139)
5) Explain, nuclear reactions taking place in the sun. (Page : 142)
6) Calculate the Q value of the following nuclear reaction. The exact masses of $_{13}Al^{27}$ are 26.9815amu, $_{14}Si^{30}$ is 29.9738, $_{2}He^{4}$ is 4.0026 amu & $_{1}H^{1}$ is 1.0078amu. (Page : 148)

III. Answer in paragraph **2 X 5 = 10**

7) Explain the medicinal applications of any five radioactive isotopes. (Page : 143)
8) What are controlled and uncontrolled fission reactions? How the fission energy is used for practical purpose? (Page : 139)

VELLORE DISTRICT
SLIP TEST –8A

CLASS : XII **SOLID STATE -II** **MARKS : 25**

I. Answer in one or two sentences 3X 2 =6

1) Write a note on the assignment of atoms per unit cell in 'fcc' (Page : 154)
2) Write a note on metallic crystals. (Page : 158)
3) State Bragg's law and explain the terms in it. (Page : 156)

II. Answer any three questions: 3X 3=9

4) The diffraction of crystal of Barium with X-ray of wavelength $2.29\ \text{Å}$ gives a first order reflection at $27°8'$. What is the distance between the diffracted planes?
5) Explain the Structure of Cesium Chloride (Page : 158)
6) What is super conductivity? (Page : 167)

III. Answer in paragraph 2 X 5 = 10

7) Explain the four different Types of Point Defects. (Page : 160)
8) a. Explain the nature of the Glass.(3) (Page : 162)
   b. List the uses of super conductors. (2) (Page : 162)

VELLORE DISTRICT
SLIP TEST –8B

CLASS : XII **SOLID STATE -II** **MARKS : 25**

I. Answer in one or two sentences 3X 2 =6

1) What is an 'Edge' atom? How many edge atoms are present per unit cell? (Page : 155)
2) Write a note on molecular crystals. (Page : 155)
3) Explain AB & AB_2 type ionic crystals with one example each. (Page : 158)

II. Answer any three questions: 3X 3=9

4) What is super conducting critical temperature? (Page : 162)
5) In a fcc lattice of A and B type atoms are present. A atoms are present at the corners while B type are at face centres. If in each unit cell, one of the A type atom is missing from the corner, what is the simplest formula of the compound? (Page : 163)
6) Calculate number of Na+ and cl- ions present in the unit cell of sodium chloride. (Page : 163)

III. Answer in paragraph 2 X 5 = 10

7) Explain Bragg's spectrometer. What are the significance of Bragg's equation? (Page : 157)
8) a. List the characteristics of Ionic crystals. (Page : 158)
   b. The diffraction of a crystal with X-ray of wavelength 2.31A° gives a first order reflection at 28°.9′. What is the distance between the diffracted planes. (Page : 164)

VELLORE DISTRICT
SLIP TEST –10 A

CLASS : XII **CHEMICAL EQUILIBRIUM -II** **MARKS : 25**

I. Answer in one or two sentences **3X 2 =6**

1) Why do equilibrium reactions referred to as dynamic equilibrium? (Page :183)
2) What is the relationship between formation & dissociation Equilibrium constants? (Page :186)
3) What is reaction quotient? (Page : 188)

II. Answer any three questions: **3X 3=9**

4) Derive the expressions for Kc and Kp for the formation of HI. (Page : 187)
5) Explain how reaction quotient determines the direction of the equilibrium. (Page : 188)
6) For the equilibrium $2SO_3(g) \rightleftharpoons 2\,SO_2(g) + O_2(g)$, the value of equilibrium constant is $4.8 \times 10^{-3}\ M$ at 700°C. At equilibrium, if the concentrations of SO_3 and SO_2 are 0.60M and 0.15M respectively. Calculate the concentration of O_2 in the equilibrium mixture. (Page : 195)

III. Answer in paragraph **2 X 5 = 10**

7) Derive the relation between K_p and K_c. (Page : 184)
8) Apply Le Chatlier's principle, and derive the conditions to get more SO_3 by the Contact process. (Page : 190,191)

VELLORE DISTRICT
SLIP TEST –10 B

CLASS : XII **CHEMICAL EQUILIBRIUM -II** **MARKS : 25**

I. Answer in one or two sentences **3X 2 =6**

1) State Le –Chatlier's principle. (Page : 190)
2) Dissociation of PCl_5 decreases in the presence of increase in Cl_2 why? (Page : 189)
3) Define equilibrium constant. (Page : 183)

II. Answer any three questions: **3X 3=9**

4) Discuss the effect of concentration on $N_2(g) + O_2(g) \rightleftharpoons 2NO\ (g)$ (Page : 191)
5) What happens when $\Delta n = 0, \Delta n = -ve\ , \Delta n = +ve$ in a gaseous reaction? (Page : 185)
6) In the equilibrium $H_2 + I_2 \rightleftharpoons 2HI$,the number of moles of $H_2, I_2\ and\ HI$ are 1,2,3 moles respectively. Total pressure of the reaction mixture is 60 atm. Calculate the partial pressures of $H_2, I_2\ and\ HI$ in the mixture. (Page : 195)

III. Answer in paragraph **2 X 5 = 10**

7) Apply Le Chatlier's principle to Haber's process, and derive the conditions for getting more amount of ammonia. (Page : 192)
8) Derive the expressions for Kc and Kp for the decomposition of PCl_5. (Page : 189)

VELLORE DISTRICT
SLIP TEST –11 A

CLASS : XII **CHEMICAL KINETICS -II** **MARKS : 25**

I. Answer in one or two sentences **3X 2 =6**

1) Define order of a reaction. (Page : 2)
2) What are Pseudo first order reactions? Give an example. (Page : 10)
3) What are simple and Complex reactions? (Page : 17)

II. Answer any three questions: **3X 3=9**

4) Explain the characteristics of order of a reaction. (Page : 2)
5) What are the characteristics of a First order reaction? (Page : 4)
6) Write any three examples for first order reactions. (Page : 4)

III. Answer in paragraph **2 X 5 = 10**

7) Derive an integral equation for the first order rate constant. (Page : 3)
8) a. In the thermal decomposition of N2O at 764°C, the time required to decompose half the reactant was 263 seconds, when the initial pressure was 290 mm of Hg and 212 seconds at an initial pressure of 360 mm of Hg. What is the order of this reaction? (3) (Page : 8,9)
   b. what is minimum or threshold energy?(2) (Page :15)

VELLORE DISTRICT
SLIP TEST –11 B

CLASS : XII **CHEMICAL KINETICS -II** **MARKS : 25**

I. Answer in one or two sentences **3X 2 =6**

1) Write Arrhenius equation. Explain the terms in it. (Page : 14)
2) The initial rate of a first order reaction is $5.2 \text{ X } 10^{-6} \text{ mol lit}^{-1}\text{sec}^{-1}$ at 298K.when the initial concentration is $2.6 \text{ X } 10^{-3} \text{ mol lit}^{-1}$.calculate the rate constant. (Page : 22)
3) In a first order reaction, it takes the reactant 40.5min to be 25% decomposed. Find the rate constant of the reaction. (Page : 9)

II. Answer any three questions: **3X 3=9**

4) Derive the relation between rate constant and half-life period. (Page : 7)
5) Show that for a first order reaction time required for 99% completion is twice that of time required for 90% completion of the reaction. (Page : 8)
6) Define Activation energy. (Page : 15)

III. Answer in paragraph **2 X 5 = 10**

7) Distinguish between simple and complex reaction. (Page : 18)
8) Explain the types of Complex reactions. (Page : 18,19)

VELLORE DISTRICT
SLIP TEST –12 A

CLASS : XII **SURFACE CHEMISTRY** **MARKS : 25**

I. Answer in one or two sentences **3X 2 =6**

1) Write a note on Negative catalysts. (Page : 28)
2) What is Peptisation? (Page : 35)
3) what are lyophilic and lyophobic colloids? (Page : 33)

II. Answer any three questions: **3X 3=9**

4) Distinguish between physical adsorption and chemical adsorption. (Page : 25)
5) Write a note on ultrafiltration. (Page : 37)
6) Explain about Electro Osmosis. (Page : 40)

III. Answer in paragraph **2 X 5 = 10**

7) Write briefly about the preparation of colloids by condensation methods. (Page : 35)
8) a. Explain the intermediate compound formation theory. (3) (Page : 30)
   b. What are Active centres?(2) (Page : 29)

VELLORE DISTRICT
SLIP TEST –12 B

CLASS : XII **SURFACE CHEMISTRY** **MARKS : 25**

I. Answer in one or two sentences: **3X 2 =6**

1) Write a note on promoters. (Page : 29)
2) Explain the medicinal uses of colloids. (Page : 42)
3) What is Tanning? (Page : 22)

II. Answer any three questions: **3X 3=9**

4) List the general characteristics of catalytic reactions. (Page : 26)
5) What are the *Homogeneous and Heterogeneous* Catalysis? (Page : 27)
6) Explain the Adsorption theory of catalysts. (Page : 31)

III. Answer in paragraph **2 X 5 = 10**

7) Write briefly about the preparation of colloids by dispersion methods. (Page : 34)
8) a. What is Brownian movement?(2) (Page : 38)
   b. Explain about Electrophoresis (3). (Page : 39)

VELLORE DISTRICT
SLIP TEST –13 A

CLASS : XII **ELECTRO CHEMISTRY-I** **MARKS : 25**

I. Answer in one or two sentences **3X 2 =6**

1) Define Electro Chemical Equivalence. (Page : 53)
2) What is common ion effect? Give an example. (Page : 63)
3) Define Equivalent Conductance. (Page : 57)

II. Answer any three questions: **3X 3=9**

4) Derive Henderson's equation. (Page : 70)
5) Write a note on Ostwald theory of indicators. (Page : 75)
6) Explain Ostwald dilution law. (Page : 52)

III. Answer in paragraph **2 X 5 = 10**

7) Write a note on semiconductors. (Page : 49)
8) Write an account of Arrhenius theory of electrolysis. (Page : 50)

VELLORE DISTRICT
SLIP TEST –13 B

CLASS : XII **ELECTRO CHEMISTRY-I** **MARKS : 25**

I. Answer in one or two sentences **3X 2 =6**

1) Define Specific Conductance (κ) (Page : 57)
2) State Kohlraush law. (Page : 61)
3) What is ionic product of water? (Page : 64)

II. Answer any three questions: **3X 3=9**

4) Explain Faraday's laws of electrolysis. (Page : 53)
5) Write the evidences of Arrhenius theory. (Page : 51)
6) Write a note on quinonoid theory of indicators. (Page : 76)

III. Answer in paragraph **2 X 5 = 10**

7) Differentiate between metallic and electrolytic conductors. (Page : 48)
8) a. What are Buffer solutions? Give an example. (2) (Page : 69)
   b. Explain the Buffer action of a base buffer. (3). (Page : 70)

VELLORE DISTRICT
SLIP TEST –14

CLASS : XII **ELECTRO CHEMISTRY-II** **MARKS : 25**

I. Answer in one or two sentences **3X 2 =6**

1) List the uses of SHE. (Page : 87)
2) The emf of the cell $Cd|CdCl_2.25H_2O \parallel AgCl|Ag$ is +0.675V. Calculate the standard free energy of the reaction. (Page : 101)
3) *Predict whether the reaction is feasible or not.* $2Ag + Zn^{2+} \rightarrow 2\,Ag^{+} + Zn$ (Page : 89)

II. Answer any three questions: **3X 3=9**

4) Derive the relation between emf and free energy. (Page : 92)
5) Derive Nernst equation. (Page : 93)
6) How is emf of a cell determined? (Page : 87)

III. Answer in paragraph **2 X 5 = 10**

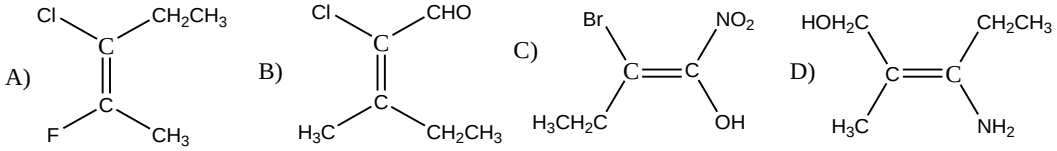
7) Describe Daniel cell. (Page : 83)
8) Write the IUPAC convention of representation of a cell. (Page : 85)

VELLORE DISTRICT
SLIP TEST –15

CLASS : XII **ISOMERISM** **MARKS : 25**

I. Answer in one or two sentences **3X 2 =6**

1) Label the following as E, Z isomers. (Page : 105)



2) What is ring flipping? (Page : 108)
3) What is chiral or asymmetric carbon? (Page : 111)

II. Answer any three questions: **3X 3=9**

4) Discuss the optical activity of Lactic acid. (Page : 111)
5) What are Diastereomers? Give an example. (Page : 113)
6) Differentiate between Racemic mixture & Meso form. (Page : 113)

III. Answer in paragraph **2 X 5 = 10**

7) Draw and Explain Various Conformations Of Cyclo Hexane. (Page : 107)
8) a. What are Enantiomer? Give an example. (2) (Page : 111)
   b. Discuss the optical activity of Tartaric acid. (3). (Page : 112)

VELLORE DISTRICT
SLIP TEST –16A

CLASS : XII **HYDROXY DERIVATIVES** **MARKS : 25**

I. Answer in one or two sentences 3X 2 =6

1) Boiling points of alcohols are very much higher than the hydrocarbons of same molecular weight : - account (Page : 129)
2) How can the consumption of alcohol by a person be detected? (Page : 134)
3) What is an Iodoform reaction? (Page : 135)

II. Answer any three questions: 3X 3=9

4) How is Glycerol synthesized (obtained) from propylene? (Page : 147)
5) How will you convert phenol into salicylic acid by Kolbe's reaction? (Page : 165)
6) Write a note on Bakelite. (Page : 167)

III. Answer in paragraph 2 X 5 = 10

7) a. What is coupling reaction.(2) (Page : 165)
   b. How will you convert Phenol into Phenolphthalein?(3) (Page : 166)
8) a. What is Dow's process?(2) (Page : 157)
   b. How is Phenol synthesized from Cumene?(3) (Page : 158)

VELLORE DISTRICT
SLIP TEST –16B

CLASS : XII **HYDROXY DERIVATIVES** **MARKS : 25**

I. Answer in one or two sentences 3X 2 =6

1) Alcohols cannot be used as a solvent for Grignard Reagents. Why? (Page : 130)
2) What is Bouvault-Blanc reduction? (Page : 140)
3) How is Terylene prepared? (Page : 142)

II. Answer any three questions: 3X 3=9

4) What is Glycerose? How is it prepared? (Page : 151)
5) What is Reimer Tiemann reaction? (Page : 165)
6) Phenol is more acidic than ethanol : account (Page : 159)

III. Answer in paragraph 2 X 5 = 10

7) a. convert phenol into phenyl benzoate.(2) (Page : 162)
   b. List the uses of Benzyl alcohol.(3) (Page : 155)
8) a. How will you convert Glycerol into GTN? (2) (Page : 149)
   b. write any three methods of preparation of benzyl alcohol.(3) (Page : 152)

VELLORE DISTRICT
SLIP TEST –17

CLASS : XII **ETHERS** **MARKS : 25**

I. Answer in one or two sentences 3X 2 =6

1) What is Metamerism? Explain with an example. (Page : 184)
2) Ethers cannot be heated to dryness. Why?
3) Discuss the electrophilic substitution reactions in anisole. (Page : 192)

II. Answer any three questions: 3X 3=9

4) Write any four methods of preparation of diethyl ether. (Page : 184)
5) How diethyl ether reacts with strong mineral acids? (Page : 187)
6) Ethers are best solvents for Grignard reagents. Why? (Page : 188)

III. Answer in paragraph 2 X 5 = 10

7) a. Write any four differences between diethyl ether and anisole.(2) (Page : 192)
   b. Explain the mechanism of hydrolysis of diethyl ether. (3) (Page : 188)
8) a. List the uses of diethyl ether. (2) (Page : 189)
   b. Mention the methods of preparation of Anisole.(3) (Page : 190)

VELLORE DISTRICT
SLIP TEST –22

CLASS : XII **CHEMISTRY IN ACTION** **MARKS : 25**

I. Answer in one or two sentences 3X 2 =6

1) In what way Antipyretics are important? (Page : 333)
2) What is Antioxidants? Give examples. (Page : 337)
3) List the dyes characteristics of dyes. (Page : 335)

II. Answer any three questions: 3X 3=9

4) Why Iodoform and Phenolic solutions are called antiseptic? (Page : 334)
5) What are Antispasmodics? (Page : 335)
6) What are Auxochromes? Give examples (Page : 336)

III. Answer in paragraph 2 X 5 = 10

7) a. How is Polyethene prepared? Mentioned its uses. (2) (Page : 338)
   b. Explain briefly on rocket propellants. (3) (Page : 337)
8) How Nylon-6 6 are prepared? Mention their uses. (Page : 340)

VELLORE DISTRICT
SLIP TEST –18A

CLASS : XII **CARBONYL COMPOUNDS** **MARKS : 25**

I. Answer in one or two sentences 3X 2 =6

1) What is Rosenmund reduction? (Page : 202)
2) What is Stephen's reaction? (Page : 204)
3) What is Clemmenson reduction? (Page : 214)

II. Answer any three questions: 3X 3=9

4) What is Urotropine? How is it prepared? Give its structure and use. (Page : 211)
5) Carry out the following conversions from benzaldehyde
   a. to Malachite green (Page : 223) b. Schiff base(Page : 220)
6) Explain the mechanism of Cannizaro reaction. (Page : 220)

III. Answer in paragraph 2 X 5 = 10

7) a. Write a note on Knoevenagal reaction.(2) (Page : 222)
   b. How will you distinguish between Acetaldehyde and Benzaldehyde? (3) (Page : 224)
8) a. What is Benzoin condensation? (2) (Page : 221)
   b. Write any three methods of preparation of acetone. (3) (Page : 225)

VELLORE DISTRICT
SLIP TEST –18B

CLASS : XII **CARBONYL COMPOUNDS** **MARKS : 25**

I. Answer in one or two sentences 3X 2 =6

1) What is Ozonolysis? (Page : 203)
2) What is Wolf kishner reduction? (Page : 215)
3) How is Acetophenone prepared by Friedel-crafts method? (Page : 229)

II. Answer any three questions: 3X 3=9

4) Discuss the reducing nature of Aldehydes. (Page : 215)
5) Differentiate between formaldehyde and acetaldehyde. (Page : 223)
6) Write a note on Popott rule. (Page : 216)

III. Answer in paragraph 2 X 5 = 10

7) a. what is crossed Cannizaro reaction?.(2) (Page : 152)
   b. How is acetone converted to (Page : 227)
   i. chloretone ii. phorone iii.mesitylene (3)
8) a. What is Perkin reaction? (2) (Page : 222)
   b. Explain the mechanism of Aldol condensation of Acetaldehyde.(3) (Page : 207)

VELLORE DISTRICT
SLIP TEST –19A

CLASS : XII **CARBOXYLIC ACIDS** **MARKS : 25**

I. Answer in one or two sentences 3X 2 =6

1) What is HVZ reaction? (Page : 249)
2) How is Lactic acid synthesized from acetylene? (Page : 252)
3) What is Trans esterification? (Page : 268)

II. Answer any three questions: 3X 3=9

4) Formic acid reduces Tollen's reagent, but Acetic acid does not-account. (Page : 250)
5) Give any three tests for carboxylic acids. (Page : 251)
6) How is Oxalic acid manufactured? (Page : 255)

III. Answer in paragraph 2 X 5 = 10

7) a. how will you convert benzoic acid into benzyl alcohol.(2) (Page : 261)
   b. Explain the mechanism of Kolbe's reaction. (3)
   (Page : 262)
8) a. How is Lactic acid synthesized from propene? (2)
   (Page : 252)
   b. Explain the effect of heat on Oxalic acid, Formic acid and Succinic acid (3)

VELLORE DISTRICT
SLIP TEST –19B

CLASS : XII **CARBOXYLIC ACIDS** **MARKS : 25**

I. Answer in one or two sentences 3X 2 =6

1) Write a note on Kolbe electro synthesis. (Page : 249)
2) List the uses of benzoic acid. (Page : 262)
3) Discuss the laboratory preparation of Oxalic acid. (Page : 254)

II. Answer any three questions: 3X 3=9

4) Explain the manufacture of Lactic acid. (Page : 252)
5) Write any three methods of preparation of benzoic acid. (Page : 259)
6) Explain the mechanism of Claisen ester condensation? (Page : 269)

III. Answer in paragraph 2 X 5 = 10

7) a. Discuss the acid strengths of Chloro acetic acids.(2) (Page : 250)
   b. Explain the mechanism of esterification reaction. (3) (Page : 246)
8) How will you convert Salicylic acid into Aspirin and methyl salicylate? (Page : 263 ,264)

VELLORE DISTRICT
SLIP TEST –20 A

CLASS : XII **ORGANIC NITROGEN COMPOUNDS** **MARKS : 25**

I. Answer in one or two sentences **3X 2 =6**

1) What happens when nitro ethane is boiled with HCl? (Page : 281)
2) What is Gabriel phalimide synthesis? (Page : 291)
3) What is Carbylamine reaction? (Page : 294)

II. Answer any three questions: **3X 3=9**

4) Explain the mechanism of nitration of benzene. (Page :283)
5) Discuss the electrolytic reduction of nitrobenzene. (Page : 282)
6) What happens when benzene diazonium chloride is reduced? (Page : 308)

III. Answer in paragraph **2 X 5 = 10**

7) a. How aniline reacts with Phosgene?(2) (Page : 301)
   b. Nitration of aniline results in Meta product.-Account. (3) (Page : 302)
8) a. What is Mustard oil reaction? (2) (Page : 294)
   b. Explain how primary, secondary and tertiary amines are differentiated by Nitrous acid. (3) (Page : 294)

VELLORE DISTRICT
SLIP TEST –20 B

CLASS : XII **ORGANIC NITROGEN COMPOUNDS** **MARKS : 25**

I. Answer in one or two sentences **3X 2 =6**

1) What is chloropicrin? How is it prepared? Mention its use. (Page : 280)
2) What is Sand Mayer reaction? (Page : 307)
3) Write a note on Gomberg Bachmann reaction? (Page : 308)

II. Answer any three questions: **3X 3=9**

4) Discuss the reduction of nitrobenzene in alkaline medium. (Page : 284)
5) Write any three methods of preparation of ethylamine. (Page : 286)
6) Write a note on coupling reaction. (Page : 308)

III. Answer in paragraph **2 X 5 = 10**

7) a. what is diazotization reaction?(2) (Page : 305)
   b. Differentiate between 1°,2°,3° amines. (3) (Page : 295)
8) Explain the mechanism of Hoffman Bromamide reaction. (Page : 290)

VELLORE DISTRICT
SLIP TEST –21

CLASS : XII **BIOMOLECULES** **MARKS : 25**

I. Answer in one or two sentences 3X 2 =6

1) How can the presence of five –OH groups in glucose be confirmed? (Page :321)
2) Define inversion of sucrose (Page : 322)
3) What is Zwitter ion? (Page : 326)

II. Answer any three questions: 3X 3=9

4) Out Line The Classification Of Carbohydrates. (Page : 319)
5) The keto group in fructose is at C-2 : how can you confirm it? (Page : 323)
6) Discuss the Structure Of Sucrose. (Page : 325)

III. Answer in paragraph 2 X 5 = 10

7) a. Define isoelectric point.(2) (Page : 327)
   b. write a note on phospholipids.(3) (Page : 328)
8) a. write a note on cellulose. (2) (Page : 325)
   b. What is peptide bond? Show the formation of peptide bond with equation. (3) (Page : 327)

VELLORE DISTRICT
SLIP TEST –22

CLASS : XII **CHEMISTRY IN ACTION** **MARKS : 25**

I. Answer in one or two sentences 3X 2 =6

1) What are Analgesics (or) Pain killers? (Page : 333)
2) In what way antacids are important? (Page : 334)
3) What are Artificial Sweetening agent? Give examples. (Page : 337)

II. Answer any three questions: 3X 3=9

4) What are Anaesthetics ? Give examples. (Page : 333)
5) What are Antimalarial? (Page : 334)
6) What are Chromophores? Give examples. (Page : 336)

III. Answer in paragraph 2 X 5 = 10

7) a. How is Polystyrene prepared? Mentioned its uses. (2) (Page : 333)
   b. What is Chemical Preservation? (3) (Page : 336)
8) Write a note on Buna rubbers. (Page : 339)