+1 CHEMISTRY STUDY PLAN 2017-18

35-40% Important Questions & book back (40 mark)
58-70% Creative questions  (60 mark)
5-10% Govt model question paper(GMQ) 2017-18 (5 mark)
2-5% quarterly, half yearly, first revision question paper(FRQ) . (5 mark)

27/3/2018  6-10 pm  Book back one mark

DAY 1  28/3/2018  wednesday

1. CHEMICAL CALCULATIONS

6-7 am  2 mark or 3 mark
1. Define formula weight(1)
2. What is Avogadro’s number? (2)
3. Define mole (3)
4. What is stoichiometry? (11)
5. Define oxidation, reduction in terms of electronic concept (13)
6. Define oxidation number (14)
7. Define Strength, molarity, molality(FRQ34 a i) , Normality, mole fraction (21)
8. What are the methods can be used to determine equivalent mass? (26)
9. How can you determine the amount of substance by volumetric analysis? (24)
10. What is equivalent mass of acid? (28)
11. What is equivalent mass of base? (29)
12. What is equivalent mass of salt? (29)
13. What is equivalent mass of oxidizing, reducing agent? (29,30)
14. Calculate equivalent mass of H₂SO₄ (29) (GMQ34 i) , HCl, CH₃COOH.
15. Calculate equivalent mass of KOH, NaOH, NH₄OH.
16. Calculate the normality of solution containing 6.3g of hydrated oxalic acid in 500ml of solution.(GMQ16)
17. Calculate the molality of an aqueous solution containing 3.0g of urea (molar mass=60) in 250g of water (23). (FRQ34a ii)

7-8 am  5 MARKS

1. How will you determine the equivalent mass of elements by hydrogen displacement method? (26)
2. How will you determine the equivalent mass of elements by oxide method? (27) (GMQ34 ii)
3. How will you determine the equivalent mass of elements by chloride method? (28)
4. Victor meyer experiment.(31)
5. Explain the rules for writing stoichiometric equations.(11)
6. General rules for assigning oxidation Number to an atom.(14)

8-9 am  Lesson 1 book back question & lesson full, ALL PROBLEM

2.GENERAL INTRODUCTION TO METALLURGY

9-10 am  2mark or 3 mark
1. Distinguish between ore and mineral with suitable example (37) (GMQ34 ii)
2. What are the different method of concentration of ore? (40) Mention the methods of concentrations of pyrolusite and Cinnabar ores? (FRQ16)
3. Define metallurgy (42)
4. What is calcinations? Give example (43)
5. What is roasting? (42)
6. Define smelting. Give example.(43)
7. What is meant by acid Bessemer process, basic Bessemer process(45)
8. Define gangue or matrix.(40)
9. What is anode mud? (45)

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10. What are the major steps involved in the metallurgical process? (42)

11. What is gravity separation? (40)

10-11 am

1. Explain froth floatation process with near diagram (40)
2. How electrolytic separation process (41)
3. What is zone refining? Explain the process (46) (GMQ34 i)
4. How nickel is extracted by Mond’s process? (47)
5. Explain about electrolytic refining (45)
6. Explain about Bessimerisation process (44)

11-12pm lesson 2 book back question & lesson full read.

3. ATOMIC STRUCTURE-I

12-1pm 2 or 3 mark

1. Thomson model of atom. (50)
2. What is Zeeman effect? (54)
3. What is stark effect? (54)
4. State Hund’s rule (59)
5. State Pauli’s exclusion principle (58)
6. What are the defects of Rutherford’s model? (52)
7. Define atomic number. (52)
8. Define mass number. (51)
9. State Aufbau principle. (59)
10. Difference between orbit, orbital. (52)
11. Write note on s,p,d orbital. (57)
12. Write the electronic configuration of chromium, copper. (63) (GMQ17)
13. Write the value of Four quantum number for the two electrons of Helium. (58) or Determine the number of electrons in the I \textsuperscript{st} shell and mention the values of its quantum numbers. (GMQ35 i)
14. Write the total number of orbitals associated with the principal quantum number n=2 write those orbitals. (FRQ34b ii)

2-3pm 5 mark

1. What are the postulates of Bohr’s theory of atom? (52)
2. Define quantum number. Explain the various quantum numbers (54) (principal quantum number (FRQ34b i) (GMQ35 ii)
3. Explain Rutherford nuclear model of an atom (51)
4. What are the limitations of Bohr’s theory? (53)
5. Explain postulates of Bohr model of an atom. (52)

3-4pm lesson 3 book back question & lesson full read.

4. PERIODIC CLASSIFICATION-I

4-5pm 2 or 3 mark

1. Law of Dobereiner’s Triad. (66)
2. Newlands Law of octaves. (67)
3. Lother meyer arrangement. (67)
4. Why noble gases have zero electron gain enthalpy? (85)
5. Out of fluorine and chlorine, which has greater electron gain enthalpy? (85)
6. Nitrogen has higher ionization energy value than oxygen. Why? (FRQ25)
7. Define electronegativity (86)
8. Why boron has lower ionization energy than Beryllium? (88)
9. What is Mendeleev’s periodic law? (67)
10. What is modern periodic law? (69) (FRQ18)

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11. What is isoelectronic? And example. (80)
12. Define ionization energy (81)
13. Define electron affinity (84)
14. Electron affinity of Be and Mg is zero. Why? (89)
15. Define periodicity. (78)
16. Write the name of the element with atomic number 101 to 105 according to IUPAC Nomenclature. (72)
17. Al$^3+$ has smaller radius than Mg$^{2+}$ find the reason. (FRQ 17)

5-6pm 5mark
1. Explain Mendeleev’s periodic table.
2. What are the difference between electron gain enthalpy and electro negativity? (87)
3. Explain the factors which influence ionization enthalpy (83)
4. Explain the factors which influence electron affinity (86)

6-7pm  lesson 4 book back question & lesson full read.

5. GROUP 1S BLOCK ELEMENTS

7-8pm 2 or 3mark
1. What are isotopes? Mention the isotopes of hydrogen. (96)
2. Preparation of deuterium. (97)
3. Mention the uses of deuterium. (99) (FRQ 26)
5. How is hydrogen peroxide prepared in the laboratory? (104)
6. How does heavy water react with metals? (103)
7. Write about reducing property of hydrogen peroxide (105)
8. Write about oxidizing property of hydrogen peroxide (105)
9. Mention the uses of hydrogen peroxide (106)
10. What is photoelectric effect? (108)
11. What are the uses of sodium? (112)
12. Mention the uses of heavy water (104)
13. How does deuterium react with nitrogen and metals? (99)
14. How is hydrogen peroxide solution concentrated? (105)
15. What are the biological properties of heavy water. (104)
16. Why alkali metals produce characteristic colour in Bunsen flame? (107)
17. Write any two methods of preparation of Tritium. (99) (GMQ 25)

& all chemical reactions.

8-9pm 5mark
1. Explain the preparation of heavy water (101)
2. Explain how liquid hydrogen can be used as a fuel (106)
3. How is sodium extracted? Explain with a diagram (110)
4. How is lithium extracted? (109)
5. Differentiate between ortho and para hydrogen (100)
6. Explain the general characteristics of 1s block elements. (107) (GMQ 27 s-block)

9-10pm  lesson 5 book back question & lesson full read.

DAY 2 6. GROUP 2S BLOCK ELEMENTS

6-7am 2 or 3 MARKS
1. What are the important ores of Magnesium? (119)
2. How is Gypsum prepared? Mention its uses (122)
3. What are the diagonal relationship between Be and Al? (119)
4. What is slaking of lime? (122)
5. How is plaster of paris prepared? Mention the uses of plaster of paris (123) (GMQ 26)

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6. What are the uses of magnesium? (121), uses of gypsum (122)
7. How is quick lime prepared? uses (122)
8. Explain the reducing action of magnesium using two examples. (FRQ27)

5 MARKS:
1. How is magnesium extracted from its ore? (119)
   Chemical properties of magnesium equations.

7-8am lesson 6 book back question & lesson full read.
7. P- BLOCK ELEMENTS

8-9am 2 or 3 MARKS:
1. Mention the nature of hydrides in P block elements (130)
2. How is boron extracted from Borax? (FRQ35 5 mark)
3. What are the uses of Borax (132)
4. Mention the uses of Nitrogen compounds (140)
5. How is nitric acid prepared in the lab? (140)
6. What are acidic oxides, basic oxides, amphoteric oxides, peroxides (144)
7. Explain inert pair effect with suitable example. (128)
8. How borax bead test is helpful in identifying basic radicals in qualitative analysis? (133)
9. Discuss the structural differences between diamond and graphite (134)
10. Write a short note on fixation of nitrogen (139)
11. How nitric acid is prepared by Ostwald process? (141)
12. Explain the laboratory preparation of ozone (145)
13. Which is considered to “earth’s protective umbrella”? (147)
14. How is ammonia manufactured by Haber’s process? (138)
15. How is molecular oxygen important for all oxygenated animals? (141)
16. Why diamond is hard compared with graphite.
17. What are the chemical properties, uses of ozone (146)
18. How does ozone react with the following (i) PbS (ii) BaO₂ (146) (GMQ18)
19. What are the different allotropes of carbon. (134)
20. What is aqua regia? How does it act as an oxidising agent?
21. Write note on fullerenes. (135)

10-11am lesson 7 book back question & lesson full read.

8. SOLID STATE-I

11-12pm 2 or 3 MARKS:
1. Define unit cell (156)
2. How many types of cubic unit cell exists? (158)
3. What are miller indices? (161)
4. What are anisotropic and isotropic? (153, 154) (GMQ28) (FRQ28)
5. How many type of cubic unit cell exists? (158)

12-1pm 5MARKS:
1. Give the distinguishing features of crystalline solids and amorphous solids (153, 154)
2. Draw a neat diagram for sodium chloride structure and explain (159) (FRQ19)
3. Draw a neat diagram for cesium chloride structure and explain (160)

2-3pm lesson 8 book back question & lesson full read.

9. GASEOUS STATE

3-4pm 2or 3 MARKS:
1. Define Boyle’s law and Charle’s law (171)
2. Define Graham’s law of diffusion (172)
3. Write the significance of Vanderwaal’s constants ‘a’, and ‘b’ (184) (GMQ19)

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Dedication!
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DON’T STRESS !
DO YOUR BEST !!
FORGET THE REST!!!

4. Write the limitations of Vanderwaal’s equation (185)
5. Define Joule Thomson’s effect (192)
6. What is meant by inversion temperature? (193)
7. State Dalton’s law of partial pressure (175)
8. What is critical temperature, critical pressure, critical volume? (186)
9. What are the conditions for liquefaction of gases? (193)
10. Classify the following gases NH\textsubscript{3}, N\textsubscript{2}, H\textsubscript{2}, CO\textsubscript{2} as “permanent” and “temporary” gases. (191) (GMQ35 ii)

4-5pm 5 MARKS:
1. Deduce the relationship between critical constants and Vanderwaal’s constants (188) (FRQ35 b)
2. Describe Linde’s process of liquefaction of gases (194)
3. Describe Claude’s process of liquefaction of gases (195) (GMQ35 i)
4. Derive Vanderwaal’s equation of state (180)
5. Explain Andrews Isotherm of Carbondioxide (186)
6. Explain Thomson’s experiment of carbondioxide (187)

5-6pm lesson 9 book back question & lesson full read.

6-7pm Volume I ONE MARK.

10. CHEMICAL BONDING

7-8pm 2 or 3 MARKS:
1. What is the structure of BeCl\textsubscript{2}? (2)
2. What is octet rule? Give an example (2)
3. What is meant by electrovalent bond? (3)
4. What is meant by hybridization? (25)
5. Define resonance (25)
6. What is covalent bonding? (4)
7. What are the different types of chemical bonding? (5)
8. What is coordinate or dative bond? (27)
9. Give reason: CCl\textsubscript{4} is insoluble in H\textsubscript{2}O while NaCl is soluble. (29) (FRQ 20)
10. Why the bond angle of NH\textsubscript{3} is less than tetrahedral angle? (FRQ29)
11. Predict the structure of SF\textsubscript{4} using VSEPR theory? (GMQ24)

ANS: The Lewis structure of SF\textsubscript{4} molecules is,

It shows that the central atom (i.e S atom) uses only four out of its six valence – shell electrons (S → 3s\textsuperscript{2}p\textsuperscript{4}) in forming 4\textsigma bonds with 4F atom and remaining one electron pair remains as a lone pair on S atom. Thus \sigma bps = 4 and lp = 1 and hence \sigma- bps + lps = 5, showing that s atom In SF\textsubscript{4} molecule is sp\textsuperscript{3}d hybridized state.

Although the spatial arrangement of five electron pairs round the s-atom is trigonal bipyramidal, due to the presence of one loan pair of electron in one of the equatorial hybrid orbitals the shape of SF\textsubscript{4} molecule gets distorted and becomes distorted tetrahedral or see-saw shape.

8-9pm 5 MARKS
1. Discuss the important properties of electrovalent compounds (11)
2. Calculate the lattice energy of NaCl using Born Haber cycle (8,9)
3. Explain the important properties of covalent compounds (13)
4. Discuss the partial covalent character in ionic compounds using Fajan’s rule (14)
5. Discuss the shapes of the following molecules NH\textsubscript{3}, H\textsubscript{2}O, SO\textsubscript{2}, SF\textsubscript{6} (19,20)
6. Explain the consequences of resonance with suitable example (25,26)

7. Calculate the lattice enthalpy of CaCl\textsubscript{2} given that the enthalpy of (GMQ36) (PAGE30) (5mark)
   (i) sublimation of Ca is 121 KJmol\textsuperscript{-1}
   (ii) Dissociation of Cl\textsubscript{2} to 2Cl is 242.8 KJmol\textsuperscript{-1}

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11. COLLIGATIVE PROPERTIES

6-7 am 2 or 3 MARKS:
1. What is colligative property? Mention them (31)
2. Define relative lowering of vapour pressure (33)
3. What do you understand by molal elevation of boiling point? (42)
4. Define osmosis and osmotic pressure (45)
5. What are the characteristics of osmotic pressure? (46)
6. Define Raoult’s law (32)
7. What is Boyle’s – Vont Hoff law (46)
8. What is Cherle’s – Vont Hoff law (46)
9. Define Vant Hoff factor (48)
10. What are isotonic solution? (46)
11. What are the advantages of Berkley Hartley method? (47) (FRQ30)
12. Calculate the vapour pressure of the solution. When the mole fraction of the solute is 0.5, the vapour pressure of the pure solvent is 0.6 atm. (36) (PROBLEM 3 MODEL) (GMQ20)

7-8 am 5 MARKS:
1. Explain the determination of relative lowering of vapour pressure by Ostwald walker method (34)
2. Describe the determination of depression in freezing point by Beckmann method (39)
3. Explain the determination of elevation of boiling point by Cottrell method (44)
4. Explain the laws of osmotic pressure and its determination by Berkley Hartley method (47)

8-9 am lesson 11 book back question & lesson full read.

12. THERMODYNAMICS-I

9-10 am 2 or 3 MARKS:
1. What are homogeneous and heterogeneous system? (56)
2. Define zeroth law of thermodynamics (61) (GMQ37 ii)
3. Define adiabatic process (58)
4. Write the differences between endothermic and exothermic process (60)
5. Define first law of thermodynamics (64)
6. What are intensive and extensive properties? and example (56) (FRQ36 a i)
7. Define enthalpy (65)
8. Define enthalpy of combustion (68)
9. Define enthalpy of neutralization (70)
10. write the difference between an exothermic and an endothermic process? (FRQ36 a ii)

10-11 am 5 MARKS:
1. Describe a bomb calorimeter and explain how heat of formation of an organic compound is determined (68)
2. Distinguish between reversible and irreversible process (59)
3. Comment on the constant value of Enthalpy of neutralization between strong acid and strong base. (GMQ37 i)

Ans: Strong acids and strong bases are completely raised in aqueous solutions. Neutralization is the combination of H+ ions of the acid and OH- ions of the base to form water. Irrespective of the nature of the acid or base. Hence the enthalpy of neutralization of a strong acid by a base is a constant.

11-12 pm lesson 12 book back question & lesson full read.
13. CHEMICAL EQUILIBRIUM

2 or 3 MARKS:
1. Define law of mass action (80) (FRQ36 b i)
2. What are reversible and irreversible reactions? (76)
3. What are homogeneous and heterogeneous equations? (80)
4. Chemical equilibrium is dynamic in nature. Why? (78)
5. What is equilibrium constant? (82)
6. Two moles of $\text{H}_2$ and three moles of $\text{I}_2$ are taken in 2dm$^3$ vessel and heated. If the equilibrium mixture contains 0.6 moles of HI, calculate $k_p$ and $k_c$ for the reaction. (94) (GMQ29)

5 MARKS:
1. Explain the characteristics of a chemical equilibrium (78)
2. Derive an expression for the $k_p$, $k_c$ for the equilibrium $\text{H}_2+\text{I}_2\leftrightarrow 2\text{HI}$ (85) (FRQ36 b ii)
3. Derive an expression for the $k_p$, $k_c$ for the dissociation of $\text{PCl}_5$ (87)
4. What are the characteristics of equilibrium constant? (91)

2-3pm
Lesson 13 book back question & lesson full read.

14. CHEMICAL KINETICS

2 or 3 MARKS:
1. Define rate law (99)
2. Define order (100)
3. What is molecularity? (101) (FRQ37 a i)
4. Define rate of a reaction (96)
5. Define rate constant (99)
6. What are the differences between order and molecularity? (101)
7. write the rate law of $pA+qB\rightarrow lC+mD$ (105) (FRQ21)
8. i) Define Half life period.
(ii) The time for half life of first order reaction is 1 hr. what is time taken for 87.5% completion of the reaction. (GMQ30 COMPULSORY)

ANS:
(i) It is the time required to reduce the concentration of the reactant to half its initial value.
(ii) Half-life period (50% reactant convert into product ) = 1 hr.

Time take to complete $87.5\% = \frac{1\ hr}{50\%} \times 87.5\% = 1\ hr\ and\ 45\ sec.$

5 MARKS:
1. Write the differences between order and molecularity (101) (GMQ 36)
2. Describe the factors on which the rate of reaction depends (98) (FRQ36 a ii)

4-5pm
Lesson 14 book back question & lesson full read.

5-7pm
Physical chemistry one word

15. BASIC CONCEPTS OF ORGANIC CHEMISTRY

2 or 3 MARKS:
1. What is catenation (109)
2. Define homolytic and heterolytic fission (128)
3. What is substitution reaction? (129)
4. What is addition reaction? (130)
5. What is elimination reaction? (130)
6. What is polymerization reaction? (131)

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1. What is condensation reaction? (131)
2. Define reduction and oxidation reaction (132)
3. What are acid and basic hydrolysis? (131, 132)
4. Note on carbonium ion and carbanion (134)
5. Write the two methods of preparation of free radicals. Formation of free radicals: (135) (GMQ32)
6. Catenation of carbon is maximum. Justify. (FRQ37 b i)
7. Write the possible isomers of the compound C_4H_{10}O. (FRQ37 b ii)

8-9pm 5 MARKS:
1. What are the characteristics of organic compounds? (113)
2. What are homologous series? Explain their characteristics (113)
3. Distinguish between electrophiles and nucleophiles (133)
4. Explain the types of isomerism (126)
5. Explain the classification of organic compounds (109)
6. Explain about inductive effect (135)
7. Explain about resonance effect (136)
8. Classify the following as electrophiles and nucleophiles. Cl^+, NH_3, Cl^-, AlCl_3 (FRQ22)
9. Substantiate with reason NH_3 is a Nucleophile and AlCl_3 is a Electrophile. (GMQ21)

12. Write the possible isomers of the compound C_4H_{10}O. (FRQ37 b ii)

9-10pm lesson 15 book back question & lesson full read.

DAY 4  31/3/2018  SATURDAY

6-7 am 16. PURIFICATION OF ORGANIC COMPOUNDS
2 or 3 MARKS:
1. What are various methods used for purification and separation of organic compounds? (140)
2. What is sublimation? (142)
3. What is chromatography? (146)
4. What are the difference between paper and thin layer chromatography? (149) (FRQ 23)
5. What are different types of distillation? (143)
6. What is crystallization? (141)
7. What are the different stages of crystallization? (141) (FRQ31)
8. What are the adsorbents used in column chromatography? (147)
9. What is an eluent? (147)
10. What are the advantages of distillation under reduced pressure? (145)
11. What are the types of paper chromatography? (148)
12. Why organic compounds need to be purified. (140) (GMQ37ii)

7-8 am 5 MARKS:
1. Explain the purification of compounds by using thin layer chromatography (147)
2. Explain the general characteristics of organic compounds (140)
3. Explain the procedure involved in steam distillation (144)
4. Explain the principle involved in the distillation under reduced pressure (145)
5. Explain about column chromatography (147)
6. Explain about paper chromatography (148) (GMQ37 i)

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17. DETECTION AND ESTIMATION OF ELEMENTS

9-10 am 2 or 3 MARKS:
1. How do you detect the presence of sulphur in an organic compound? (153)
2. How do you detect the presence of halogen in an organic compound? (153)
3. How do you detect the presence of oxygen in an organic compound? (152)
4. Write the preparation of Lassaigne’s extract. (152) [FRQ38 a i] & (refer all problems)
5. 0.12g of an organic compound gave on combustion gave 0.11g of CO₂. Calculation the percentage of C in the organic compound. (162) [GMQ22]
ANS: Weight of organic compound = 0.12g
% of Carbon = \( \frac{12}{44} \times \frac{0.11}{0.12} \times 100 = 25\% \).

10-11 am 5 MARKS:
1. How do you detect the presence of carbon and hydrogen in an organic compound? (151)
2. Write the chemical equations involved in Lassaigne test for nitrogen (152)
3. Explain the estimation of carbon and hydrogen by Lebig’s combustion method (154)
4. Explain the estimation of nitrogen by Kjeldahl’s method (157) [FRQ38 a ii]
5. Explain the estimation of sulphur by Carius method (160)
6. Explain the estimation of halogen by Carius method (161)

11-12 pm lesson 17 book back question & lesson full, PROBLEMS read.

18. HYDROCARBONS

12-1 pm 2 or 3 MARKS:
1. What is ozonolysis? (180)
2. Define Markovnikov’s rule (179)
3. Mention the uses of ethylene (181)
4. Mention the uses of acetylene (188)
5. What is wurtz reaction? (170)
6. Write Kolbe’s electrolytic method (171)
7. What is Finkelstein’s reaction (173)
8. Define aromatization (174)
9. What is epoxidation? (181)
10. Write Diels Alder reaction (181)
11. What are test for acetylene (188)
12. What happens when acetylene is passed through red hot tube? (188) [FRQ24]
13. What is hydroboration? (179)
14. How is ethylene hydrated? (179)
15. Complete and explain the following reactions CH₃-CH=CH₂→? [FRQ32 COMPULSORY]

16. Complete the following Reaction (GMQ 33)

(a) \( \text{CH}_4 + \text{O}_2 \) → Red hot tube

(b) \( 3\text{CH} \equiv \text{C} - \text{CH}_3 \) → Under pressure

(c) \( \text{C}_6\text{H}_5\text{OH} \) → Zn/Dry distillation

12-3 pm lesson 18 book back question & lesson full ALL CHEMICAL REACTIONS read.

3-4 pm 19. AROMATIC HYDROCARBONS

2 or 3 MARKS:
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1. Define aromaticity (193)
2. What is Friedel craft’s ALKYLATION reaction? (GMQ23) (195)
3. Mention the uses of benzene (199)
4. What is wurtz fittig reaction? (213)
5. Write briefly resonance in benzene (201)
6. uses of benzene(199)
7. phenol to benzene (195)( phenol +Zn→?) (GMQ 33)
8. How will you convert sodium benzoate into benzene? (195) (FRQ33)
9. Aromaticity (193) OR Using Huckel’s Aromatic rule prove naphthalene is a aromatic compound.

Evident for Naphthalene is a Aromatic: (GMQ 31)

Ans: (i) It is planar.
(ii) It has (4n + 2) π electrons. (i.e) 10π electrons.
(iii) Those π electrons are delocalized in a closed structure.

5 MARKS
1. Explain about the structure of benzene (198)

4-5pm lesson 19 book back question & lesson full read.

5-6pm 20. ORGANIC HALOGEN COMPOUNDS

2 or 3 MARKS:
1. What is Hunsdiecker reaction? (206)
2. What is Finkelstein reaction? (206)
3. What is swartz reaction? (207)
4. How is DDT prepared? Mention its uses (214)
5. What is fittig reaction? (213)
6. What are Grignard reagent? (215)
7. Mention the uses of alkyl halides (211)
8. Dow process(213 1st reaction)
9. Sandmeyer reaction(212 preparation of aryl halide 2nd)
10. General properties(212) (GMQ)
11. Uses of alkyl halide(211)

6-7pm 5 MARKS:
1. Discuss SN1 reaction mechanism (209)
2. Discuss SN2 reaction mechanism (208)
3. Discuss E1 mechanism (210)
4. Discuss E2 mechanism (210)
5. Explain synthetic uses of methyl magnesium iodide (216)
6. What are the general methods of preparation of alkyl halides (206)
7. An organic compound (A) of Molecular formula C\textsubscript{7}H\textsubscript{8} on treatment with Cl\textsubscript{2} in the presence of sunlight to give compound (B) of molecular formula C\textsubscript{7}H\textsubscript{7}Cl. Compound (B) react with Zn-Cu couple to give back compound (A). Compound (B) on mild oxidation with Cu(NO\textsubscript{3})\textsubscript{2} gives (C) C\textsubscript{7}H\textsubscript{6}O. Identify (A), (B), (C). Explain the reactions. (215) (GMQ38)

7-8pm lesson 20 book back question & lesson full read.

8-10 pm ORGANIC ONE WORD & organic problem.

ORGANIC PROBLEMS
1. Compound (A) has molecular formula C\textsubscript{2}H\textsubscript{2}. (A) reacts with in presence of dil. Sulphuric acid and mercuric sulphate to give, an aldehyde (B) of molecular formula C\textsubscript{2}H\textsubscript{4}O. (A) when passed through red hot iron tube under pressure gives an aromatic compound (C) of molecular formula C\textsubscript{6}H\textsubscript{6}. Identify A, B & C and explain the reactions.
2. An organic compound (A) of molecular formula C₂H₆O on reaction with H₂SO₄ gives compound (B) of molecular formula C₂H₄. Compound (B) on reaction with alkaline KMnO₄ gives compound (C) of molecular formula C₂H₂O₂. Identify A, B, C and write the reactions involved.

3. An organic compound (A) of molecular formula C₃H₂ on reaction with hydrogen in the presence of Ni, gives a compound (B) of molecular formula C₃H₄. Compound (B) is mixed with O₂ under pressure at 200°C to 400°C gives compound (C) of molecular formula C₆H₈O. Identify A, B, C and write the reactions involved.

4. An aromatic hydrocarbon (A) of molecular formula C₆H₆ reacts with Bromine in the presence of FeBr₃ gives (B) of molecular formula C₅H₅Br. (B) reacts with ethyl bromide in the presence of sodium in ether gives (C) of molecular formula C₈H₁₀. Identify A, B and C and explain the reactions involved.

5. An organic compound (A) of molecular formula C₂H₄ undergoes hydrolysis to give a compound (B) of molecular formula C₂H₂O. Compound B on reaction with con.H₂SO₄ gives compound A. Compound ‘A’ undergoes reaction with Bayers reagent to give compound ‘C’. Identify A, B and C and write the reactions.


Respected teachers/parents/students,
If any mistakes or your suggestions, please send your valuable thoughts to that whatsapp number or email id to help all the students.

WE WISH U ALL THE BEST

ACTC
ADVANCED CHEMISTRY TUITION CENTRE
41/1, PWD ROAD, NEAR PARTHAS,
IDEAL MATHS COACHING CENTRE (OPP), NAGERCOIL,
KANYAKUMARI DISTRICT 9940847892, 9487762892.
2018-19 ADMISSION OPEN +1, +2 CHEMISTRY & BIOLOGY
IX, X ALL SUBJECT (STATE BOARD & CBSE)
+2, 10th class starts from 14-4-2018.

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### DAY 5 1/4/2018 SUNDAY

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### DAY 6 2/4/2018 MONDAY

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3/4/2018 CHEMISTRY EXAM 10-12:45PM

4-6AM REVISE VOLUME-I
6-8AM REVISE VOLUME-II
8-9AM SCHOOL
9-30AM ONE WORD
9:40AM EXAM HALL
10AM QUESTION PAPER READ. WRITE WELL. SCORE CENTUM.

**ALL THE BEST**

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