BLUE PRINT - CHEMISTRY - Higher Secondary – Second Year

Time : 3 Hours **Maximum Marks : 150**

S.No	OBJECTIVES	KNOWLEDGE				UNDERSTANDING				APPLICATION				SKILL				TOTAL
		E/LA	SA	VSA	O	E/LA	SA	VSA	O	E/LA	SA	VSA	O	E/LA	SA	VSA	O	
1.	Atomic Structure	-	-	-	1(1)	-	-	1(3)	-	-	-	-	1(1)	-	1(5)	-	-	10
2.	Periodic Classification	1(5)	-	-	-	-	-		1(1)	-	-	1(3)	-	-	-	-	-	09
3.	p-Block elements	-	-	1(3)	-	-	-	1(3)	-	1(5)	-	-	-	-	-	-	1(1)	12
4.	d-Block elements	-	1(5)	1(3)	-	-	-	1(3)	1(1)	-	-	-	1(1)	1(5)	-	-	-	18
5.	f-Block elements	-	-	-	-	-	1(5)	-	1(1)	-	-	-	1(1)	-	-	-	-	07
6.	Co-ordination and Bio-coordination	1(5)	-	-	-	-	-	-	1(1)	-	1(5)	-	-	-	-	-	-	11
	compounds																	
7.	Nuclear Chemistry	-	-	-	-	1(5)	-	-	-	-	-	-	1(1)	-	-	1(3)	-	09
8.	Solid state	-	-	-	-	-	-	1(3)	-	1(5)	-	-	-	-	-	-	1(1)	09
9.	Thermodynamics-II	-	-	-	1(1)	-	-	-	1(1)	-	1(5)	-	-	-	-	1(3)	-	10
10.	Chemical equilibrium-II	-	-	1(3)	-	-	1(5)	-	-	-	-	-	1(1)	-	-	-	1(1)	10
11.	Chemical Kinetics-II	-	-	1(3)	-	-	-	-	1(1)	-	-	1(3)	-	-	1(5)	-	-	12
12.	Surface Chemistry	1(5)	-	-	1(1)	-	-	1(3)	1(1)	-	-	-	1(1)	-	-	-	-	11
13.	Electrochemistry-I	-	-	-	1(1)	1(5)	-	1(3)	-	-	-	-	-	1(5)	-	-	-	14
14.	Electrochemistry-II	-	-	-	-	1(5)	-	-	-	-	1(5)	-	-	-	-	-	-	10
15.	Isomerism in Organic Chemistry	-	-	1(3)	-	1(5)	-	-	-	-	-	-	-	-	-	-	-	08
16.	Hydroxy Derivatives	-	-	1(3)	-	-	-	1(3)	-	-	-	-	1(1)	1(5)	-	-	-	12
17.	Ethers	-	-	-	1(1)	-	1(5)	-	-	-	-	-	-	-	-	-	1(1)	07
18.	Carbonyl Compounds	-	-	1(3)	-	-	1(5)	-	-	-	-	-	1(1)	1(5)	-	-	-	14
19.	Carboxylic Acids	-	-	1(3)	-	1(5)	-	-	-	-	1(5)	-	1(1)	-	-	-	-	14
20.	Organic Nitrogen Compounds	1(5)	-	-	-	-	-	-	2(1)	-	-	-	1(1)	-	-	1(3)	-	11
21.	Bio molecules	-	-	-	1(1)	-	-	-	1(1)	1(5)	-	-	-	-	-	-	-	07
22.	Chemistry in Action	-	-	-	-	-	-	1(3)	-	-	1(5)	-	-	-	-	-	-	08
23.	Problems in Chemistry																	
	TOTAL	**20**	**5**	**24**	**6**	**25**	**20**	**24**	**10**	**15**	**25**	**6**	**10**	**20**	**10**	**9**	**4**	**233**

	No. of Questions	Marks
Summary / E / LA	8	80
Short Answers (SA) No.	12	60
Very Short Answers (VSA) No.	21	63
Objective	30	30
		233

Knowledge : 24% Application : 24%
Understanding : 34% Skill : 18%

Scheme of options / Scheme of Sections

Part - I MCQ - 30/30
Part - II VSA - 15/21
Part - III SA - 7/12
Part - IV E/LA - 3/6 & 1 Compusory (Either or Type)

Instructions to the Question Paper Setters

Blue Print for XII Chemistry

Time : 3 hours **Max. Marks : 150**

Part - I

30x1=30 marks

Choose the Correct answer : answer all questions.

Question numbers : from 1 to 30.

Distribution of questions : 10-Inorganic, 10-Physical and 10- Organic Portions.

Part - II

15 x 3 = 45 marks

Answer in one or two sentences : Question number from 31-51.

Answer 15 questions out of 21 questions.

Question number 31 -37 (7) from Inorganic

Question number 38 - 44 (7) from Physical

Question number 45 - 51 (7) from Organic

Part - III

7 x 5 = 35 marks

Answer any Seven questions choosing atleast two from each section A, B and C

Section - A - Inorganic 4 questions 52-55 (one problem)

Section - B - Physical 4 questions 56-59 (one problem)

Section - C - Organic 4 questions 60-63 (one mechanism)

Part - IV

4 x 10 = 40 marks

Question number 70 is compulsory consisting of problems carrying 10 marks (either or type)

70 (a) Organic Problem - 5 marks

(b) Inorganic Problem - 5 marks

OR

(c) Organic Problem - 5 marks

(d) Physical Problem - 5 marks

Question number 64 and 65 - Inorganic

Question number 66 and 67 - Physical

Question number 68 and 69 - Organic

answer any three from question number 64-69

Note : 1. In Part-III five mark questions no subdivisions are allowed.

2. In Part-IV ten mark questions there should be two sub divisions each with 5 marks.

3. 60% of the total layout of questions (for 233 marks) must be asked from self evaluation questions of all branches of chemistry (Inorganic, Physical and Organic) in equal propotions.

4. Problems can be asked from any lesson or chapter instead of descriptive questions and vice versa.

5. Problems

Part - I	MCQ 4 questions	4 x 1 = 4 (1+2+1)
Part - II	3 questions	3 x 3 = 9 (1+1+1)
Part - III	Inorganic - 1 question Physical - 1 question	2 x 5 = 10
Part - IV	question no 70 is compulsory, either or choice 2 x 10 = 20 marks maximum marks 4 + 9 +10 + 20 = 43 marks.	

6. A question paper should not contain problems for more than 43 marks out of 233 marks.

7. Organic reaction mechanicsm may be asked one in Part-III Section-C (organic) and another in Part-IV question number 68 or 69 subdivision for 5 marks.

8. List of Mechanisms EM. Page No.

(i) Aldol condensation of acetaldehyde 281-282

(ii) Aldol condensation of acetone 282-283

(iii) Crossed aldol condensation 283

(iv) Cannizaro reaction 300

(v) Claisen or Claisen schmidt reaction 301

(vi) Mechanism of esterification 336

(vii) Kolbe's reaction 355

(viii)Bromination of salicylic acid 356

(ix) Nitration of benzene 387-388

(x) Hoffmann's bromamide reaction 398-399

(xi) Reaction of aniline with carbondisulphide ..... 411 - 412

For other organic reactions mechanisms need not be expected.

9. One mark question from numbered tables should not be asked.
10. For all questions answers must be available in the prescribed +2 Chemistry text book.
11. Electronic configuration of elements for which extraction is given in the book may be asked for one mark questions.
12. A question paper should not contain more than 2 questions from the mechanism.
13. Numerical data given in the form of numbered tables in all branches should not be asked in the form of questions.
14. No questions should be asked from the boxed (including deleted portion and chronology) portions of lessons.
15. For theory examination logarithmic tables are allowed.
16. One mark, three marks and five marks problems (in both Part-III & Part-IV) may be given in lessons 1, 3, 4, 6 and 7 for inorganic chemistry, lessons 8, 9, 10, 11, 13 and 14 for physical chemistry and lessons 16, 17, 18, 19 and 20 for organic chemistry.
17. Inorganic and Organic problem

    a) For one mark - Identification of - A.

    b) For three marks - Identification 'A' and 'B' with explanation.

    c) For five marks - Identification 'A', 'B' and 'C' with explanation.

Modified Instructions Regarding

XII Chemistry Practicals

Max. Marks : 50

Internal Assesment : 20 Marks

1. Record work 10 Marks
2. Project work 10 Marks

Volumetric Analysis : 18 Marks

1. Simple or Short procedure 5 marks
2. Titre value - 1st Titration 5 marks
3. Titre value - 2nd Titration 5 marks
4. Calculations 3 marks

Note :

1. Titre value upto 2% error 5 marks

2% to 3% error	4 marks
3% to 4% error	3 marks
4% to 5% error	2 marks
above 5% error	1 mark

2. Marks for calculations

Normality calculation and 1st Titration caluculation	1 mark
2nd Titration calculation	1 mark
weight calculation	1 mark

3. Usage of calculators is allowed

4. Repetition of Questions in Volumemetric analysis can be permitted if it is required.

Mixture Salt Analysis 12 marks

1. Preliminary Tests

Flame Test, Ash Test, Action of dil HCl, Cu turnings Test and Chromyl Chloride Test 2 marks

2. Sodium Carbonate Extract Preparation and Tests *2 marks*

3. Group Separation (Including ammonium ion) *2 marks*

4. Group Analysis (Including ammonium ion) *2 marks*

5. Confirmatory Tests and Results (for all four radicals *4 marks*

Note :

1. For each radical one confirmatory Test is enough
2. Any one of the Positive Tests can be written as confirmatory Test for all the four radicals.
3. Just spotting of radicals ½ mark for each radical.
4. Writing Conformatory Test and Result alone 1 mark for each radical.

List of Salt Mixtures 12 marks

1. $NH_4Cl + CuSO_4$
2. $(NH_4)_2\ CO_3 + BaCl_2$
3. $Pb(NO_3)_2 + CaCO_3$
4. $CuCl_2 + CaCO_3$
5. $Cu(NO_3)_2 + ZnSO_4$
6. $FeCl_3 + MgSO_4$
7. $CuCO_3 + Al_2\ (SO_4)_3$
8. $ZnS + BaCl_2$
9. $Al_2\ (SO_4)_3 + NH_4Cl$
10. $(NH_4)_2\ CO_3 + Pb(NO_3)_2$