

Syllabus for 2nd term examination March / April 2022

Class	12 th
Subject	Chemistry

1. Total Chapters = Chapter 08 to 16 = 09 Chapters
2. Maximum Marks = 50
3. Duration = 03 Hr
4. Total No of Question: = 33
 - a. Q.1 to Q. 20 Objective type Questions (1 Mark each)
 - b. Q.21 to Q. 29 Subjective type Questions (2 Marks each)
 - c. Q. 30 to Q. 33 Subjective type Questions (3 Marks each)

5. Chapter wise distribution of Marks

Sr. No.	Chapter No.	Name of Chapter	1 Mark Questions	2 Marks Questions	3 Marks Questions	Total Questions	Total Weightage
1.	Chapter – 8	d- and f - block elements	2	-	1	3	5
2.	Chapter – 9	Coordination Compounds	3	2	-	5	7
3.	Chapter – 10	Haloalkanes and Haloarenes	2	1	1	4	7
4.	Chapter – 11	Alcohols, Phenols and Ethers	3	2	-	5	7
5.	Chapter – 12	Aldehydes, Ketones and Carboxylic Acids	3	1	1	5	8
6.	Chapter – 13	Amines	3	-	1	4	6
7.	Chapter – 14	Biomolecules	2	1	-	3	4
8.	Chapter – 15	Polymers	2	1	-	3	4
9.	Chapter – 16	Chemistry in everyday life	-	1	-	1	2
Total			20	9	4	33	50

HIMACHAL PRADESH BOARD OF SCHOOL EDUCATION, DHARAMSHALA

Model Question Paper

Second Term Examination, March / April 2022

Class – 12

Duration – 03:00 Hr

Chemistry

M.M.: 50

- Instructions:
- All questions are compulsory.
 - While answering your Questions, you must indicate on your Answer-book the same Question No. as appearing in your Question Paper.
 - Internal choices are given in some questions.
 - Question No. 1 to 20 carry 1 mark each, Question No. 21 to 29 carry 2 marks each and Question No. 30 to 33 carry 3 marks each.
 - Make neat and clean diagrams where required.

- Q.1 The d block elements belong to (1)
- | | |
|------------------------|------------------------|
| a) 2 Group to 12 Group | b) 3 Group to 11 Group |
| d) 4 Group to 12 Group | d) 3 Group to 12 Group |
- Q.2 The relative ease of dehydration of alcohols follows the following order: (1)
- | | |
|-----------------------------------|-----------------------------------|
| a) Tertiary < Secondary < Primary | b) Primary < Secondary < Tertiary |
| c) Secondary > Primary > Tertiary | c) Secondary < Primary < Tertiary |
- Q.3 Which of the following is prepared by Gabriel Phthalimide reaction (1)
- | | |
|-----------------------------|---------------------|
| a) Primary Aromatic Amines | b) Secondary Amines |
| c) Aliphatic Primary Amines | c) Tertiary Amines |
- Q.4 which of the following is correct with respect to $[\text{Mn}(\text{CN})]^{2-}$ (1)
- | | |
|--|--|
| a) It is dsp^2 hybridized, square planer | b) It is d^2sp^3 hybridised, Octahedral |
| c) It is sp^3d^2 hybridized, Octahedral | d) It is sp^2d^2 hybridised, square planer |
- Q.5 Alkyl halides react with which of the following metal in dry ether to give hydrocarbons containing double the number of carbon atoms present in halide. (1)
- | | |
|-------|-------|
| a) K | b) Na |
| c) Zn | d) Mg |
- Q.6 Three important reagents are required for the conversion of propyne to Acetone. Identify which of the following is not among three? (1)
- | | |
|----------------------------|--------------|
| a) HgSO_4 | b) Zink Dust |
| c) H_2SO_4 | d) Water |
- Q.7 The protein responsible for blood clotting is
- | | |
|-------------|----------------|
| a) Albumins | (b) Globulins |
| (c) Fibroin | (d) Fibrinogen |
- Q.8 Amines play important role in survival of human life. Naturally they are found in (1)
- | | |
|--------------|-----------------|
| a) Vitamins | b) Proteins |
| c) Alkaloids | d) All of these |

- b) Write the name and structures of monomer of Buna – S . (1,1)
- Q.28 a) Draw the figure to show the splitting of d- orbitals in an octahedral crystal field?
b) Aqueous copper sulphate solution (blue in colour) gives a bright green solution with aqueous potassium chloride. Explain (1,1)
- Q.29 a) What do you mean by denaturation of Proteins?
b) What are the products of hydrolysis of sucrose? (1,1)
- Q.30 a) What are interstitial Compounds?
b) What is meant by disproportionation of an oxidation state? Give example (1,2)
- Q.31 a) Explain why dilute Sulphuric acid is added in nitration of phenol?
b) Alkyl halides, though polar, are immiscible with water.
c) How will you convert Chlorobenzene to biphenyl? (1,1,1)
- OR
- a) Give reasons why the presence of nitro group (-NO₂) at ortho or para positions increases the reactivity of haloarenes towards nucleophilic substitution reactions.
b) Grignard's reagents should be prepared under anhydrous conditions.
c) How will you convert Aniline to Bromobenzene? (1,1,1)
- Q.32 Describe the following:
a) Cross Aldol Condensation
b) Decarboxylation (1½, 1½)
- OR
- a) Friedel – Crafts Acylation
b) Aldol Condensation Reaction (1½, 1½)
- Q.33 Illustrate the following reaction with suitable example:
a) Hofmann's bromamide reaction
b) Sandmeyer's Reaction (1½, 1½)
- OR
- How will you carry out the following conversions?
a) Ethanoic Acid to methanamine
b) Nitrobenzene to benzoic acid (1½, 1½)