HP BOARD OF SCHOOL EDUCATION DHARAMSHAL

Syllabus for 2nd term examination March / April 2022

Class	11 Th	
Subject	Chemistry	

1. Total Chapters = Chapter 06 to 14 = 09 Chapters

Maximum Marks = 50
 Duration = 03 Hr

4. Total No of Question:

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.	Chapter No.	Name of Chapter	No of 1	No of 2	No of 3	Total	Total
No.			Mark	Marks	Marks	Questions	Weightage
			Questions	Questions	Questions		
1.	Chapter – 6	Thermodynamics	2	2	-	4	6
2.	Chapter – 7	Equilibrium	2	2	-	4	6
3.	Chapter – 8	Redox Reaction	2	-	1	3	5
4.	Chapter – 9	Hydrogen	1	-	1	2	4
5.	Chapter – 10	The s- block elements	2	-	1	3	5
6.	Chapter – 11	The p – block elements	3	-	1	4	6
7.	Chapter – 12	Organic Chemistry - Some Basic Principals & Techniques	4	2	-	6	8
8.	Chapter – 13	Hydrocarbons	4	2	-	6	8
9.	Chapter – 14	Environmental Chemistry	-	1	-	1	2
Total						33	50

HIMACHAL PRADESH BOARD OF SCHOOL EDUCATION, DHARAMSHALA

Model Question Paper

Second Term Examination, March / April 2022

Class – 11

Duration – 03:00 Hr Instructions: i) ii) iii) iv) v)		Cher	M.M.: 50			
		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 1mark 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	When system does not exchange heat with surrounding the process is called					
	a)	Isothermal	b)	adiabatic		
	c)	thermal	d)	Isochoric		
Q.2	Which	n of the following is not Lewis acid				
	a)	BF ₃	b)	AICI ₃		
	c)	FeCl ₃	d)	PH ₃		
Q.3	.3 Which of the following can act as an oxidising as well as reducing agent					
	a)	H_2O_2	b)	SO₃		
	c)	H ₂ SO ₄	d)	HNO₃		
Q.4	How many hydrogen bonded water molecules are associated with CuSO ₄ .5H ₂ O					
	a)	Five	b)	One		
	c)	One	d)	Three		
Q.5	When	Sodium reacts with excess of oxyger	n the oxida	tion number of oxygen changes from		
	a)	0 to – 1	b)	0 to – 2		
	c)	- 1 to - 2	d)	Does not change		
Q.6	Group	o 13 elements shows				
	a)	only + 1 oxidation state	b)	only + 3 oxidation state		
	c)	+ 1 and +3 oxidation state	d)	+1, +2 and +3 Oxidation States		
Q.7	Inductive effect involves					
	a)	ation				
	b)	ation				
	c)	delocalisation of $\boldsymbol{\sigma}$ electrons				
	d)	delocalisation of π electrons				
Q.8	The IUPAC name of given structure is					
		E				
	a)	Hexane	b)	Isopentane		
	c)	3 - Ethylbutane	d)	3 - Methylpentane		

Q.9	wurtz	titting reaction is used to unite					
	a)	Two alkyhalides	b)	Two aryl halides			
	c)	One alkyl and One aryl halide	d)	None of these			
Q.10	The ea	The ease of dehydrohalogenation for different halogen is in the order					
	a)	Iodide > Bromide > Chloride	b)	Bromide > Iodide > Chloride			
	c)	Chloride > Bromide > Iodide	d)	Iodide > Chloride > Bromide			
Q.11	All carbon atom in benzene are hybridized.						
Q.12	If ΔG is – ive (ΔG < 0) then the process is						
Q.13	In the relation $K_p = K_c (RT)^{\Delta n}$, Δn represents						
Q.14	Loss of electrons by any species is called as						
Q.15	is the only alkali metal which when burnt in air forms a mixture of oxides as well nitride.						
Q.16	Thermodynamically the most stable form of carbon is						
Q.17	The general electronic configuration of Group – 13 elements is						
Q.18	8 If a covalent bond breaks in such a fashion that the shared pair of electrons remains with one						
	fragm	ents the cleavage is called					
Q.19	Two s	uccessive members of a homologous s	series diffe	r from each other in their molecular formula			
	by						
Q.20	The p	rocess of elimination of Carbon dioxide	e from a Ca	arboxylic acid is known as			
Q.21	Calcul	Calculate the heat of combustion of ethylene (gas) to from CO ₂ (gas) and H ₂ O (gas) at 298k and					
	atmospheric pressure. The heats of formation of CO_2 , H_2O and C_2H_4 are -393.7 , - 241.8, + 52.3 kJ per atmospheric pressure.						
	mole	respectively					
		OR					
0.22		e relation between C_p and C_v for an ide					
Q.22	Differ	entiate between classical and photoch	iemicai sm	og.			
Q.23	Explain the term electrophile and nucleophile with example.						
Q.24	Explain the relative stability of conformations of n-butane.						
Q.25	a)	State Le chatelier's principle.					
	b)	State the Law of Chemical equilibriu	ım				
Q.26	a)	Define Specific Heat.					
	b)	State the first Law of Thermodynan	nics.				
Q.27	Explain why tertiary carbocation is more stable then secondary and primary carbocations?						

State and explain electromeric effect with example.

- Q. 28 a) What is peroxide effect?
 - b) State Huckel's rule of aromaticity.

OR

Write short note on the following:

- a) Wurtz Reaction
- b) Friedel Craft Reaction
- Q.29 Calculate the p^{OH} value of the solution if its p^{H} is 7.

OR

At equilibrium the concentration of $N_2 = 3.0 \times 10^{-3} M$, $O_2 = 4.2 \times 10^{-3} M$ and $NO = 2.8 \times 10^{-3} M$ in a sealed vessel at 800K. What will be K_c for the reaction

$$N_2(g) + O_2(g) \rightleftharpoons 2NO(g)$$

- Q.30 a) What is the cause of hardness of water?
 - b) Why ice floats over water?
- Q.31 a) Define oxidation and reduction in terms of electrons transfer.
 - b) Can we store copper sulphate in an iron vessel?
 - c) Define electrode potential.

OR

- a) What do you mean by Electrochemical Series?
- b) Define disproportionation reaction.
- c) Write the functions of Salt bridge in electrochemical cell.
- Q.32 a) Why Be and Mg do not impart colour to the flame?
 - b) Why do the alkali metals give blue solution, when treated with liquid NH₃?
 - c) Why is the oxidation state of Na and K always + 1?

OR

- a) Why is Na metal always kept in Kerosine Oil or Paraffine wax?
- b) Why Li is strongest reducing agent?
- c) Why Alkaline earth metals are harder than alkali metals?
- Q.33 a) Define inert pair effect.
 - b) Give reactions to justify amphoteric nature of Aluminium.

OR

- a) Define catenation.
- b) Explain why there is phenomenal decrease in ionisation enthalpy from Carbon to Silicon?