Name of Student	Class	Subject	Board	Chapter
	9th	Chemistry	FB	07
Date :_____	Objective			Teacher Remarks

Section - A

Q. No.1:- Circle the correct option. Each part carries one mark.

01	in which of the following changes the nitrogen atom is reduced:						
A	N_2 to NO	b	N_2 to NO_2	c	N_2 to NH_3	d	N_2 to HNO_3
02	Which of the following changes reaction is an example of oxidation:						
A	Chlorine molecule to chloride ion	b	Silver atoms to silver(I) ion	c	Oxygen molecule to oxide ion	d	Iron (iii) ion to iron (II) ion
03	Which of the following elements in the given reaction is reduced: $ZnO + H_2 \rightarrow Zn + H_2O$						
A	H_2	b	ZnO	c	Zn	d	O
04	Consider the following reaction:						
A	Reducing agent	b	Oxidizing agent	c	Catalyst	d	Electrolyte
05	The oxidation state of Cr in K2Cr2O7 is:						
A	12	b	6	c	3	d	Zero
06	Which of the following statement is not correct about the galvanic cell:						
A	Cations are reduced at cathode	b	Anions are oxidized at anode	c	Electrons flow from cathode to anode	d	Oxidation occurs at anode
07	Which of the following is not true about the Daniel cell:						
A	Half-cell of an active metal acts as cathode	b	Half-cell contains an element in contact with its ions in aqueous solution	c	A salt bridge connects the two half cells	d	A spontaneous oxidation-reduction reaction generates electricity.
08	Which of the following do not involve electrolytic process:						
A	Refining of copper	b	Manufacture of sodium from NaCl	c	Electroplating of steel	d	Reduction of metal oxide by a reducing agent
09	Galvanizing is:						
A	Coating with Sn	b	Coating with Zn	c	Coating with Cr	d	Coating with Cu
10	Which of the following is true for the Nelson cell:						
A	Sodium metal is produced at anode	b	Chlorine gas is produced at anode	c	Hydrogen gas is produced at anode	d	Sodium ions are not reduced at cathode
11	Elements in free state have_____ oxidation number:						
A	1	b	0	c	2	d	3
12	Nelson's cell is used to prepare caustic soda along with gases. Which of the following gas is produced at cathode:						
A	Cl_2	b	H_2	c	O_3	d	O_2

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Section - B

Q. No.1:- Attempt any eleven parts. The answer of each part should not exceed 3 to 4 lines. (11×3=33).

01	What is oxidation state?	02	Why tin plated steel is used to make food cans?
03	Identify reducing agent in the following reaction: $CuO + H_2 \rightarrow Cu + H_2O$	04	Write chemical reactions that occur in Nelson's cell.
05	Explain one example from daily life which involves oxidation-reduction reaction?	06	What is the oxidation number of Cr in chromic acid (H_2CrO_4)?
07	What materials do you need to electro plate copper onto an iron nail? Make a diagram showing how these materials should be arranged.	08	Design an experiment to demonstrate cathodic protection from corrosion.
09	List the possible uses of electrolytic cell.	10	Describe how a battery produces electrical energy.
11	Explain how food and beverage industries deal with corrosion?	12	Explain how chemistry interacts with photography?
13	Find the oxidation state of S in the following compounds: A. H_2S B. $Na_2S_2O_3$		

Q. No.4:- Attempt any TWO questions. All questions carry equal marks: (2×10=20)

Q. No.1:- (a).Define oxidation and reduction in terms of loss or gain of oxygen or hydrogen.

(b). Describe the method of recovering metal from its ores.

Q. No2:- (a). Explain electrolytic refining of copper.

(b).Compare the effects of Al_2O_3 and Fe_2O_3 formation on their parent metals and cite examples from daily life.

Q. No.3:- (a).Electrolysis has a major role in electrochemical industries.

(b).Distinguish between electrolytic and voltaic cell.