

Sl. No. 2002831

[www.shenschool.in](http://www.shenschool.in)**SSLC EXAMINATION, MARCH - 2019****CHEMISTRY**

(English)

Time : 1½ Hours

Total Score : 40

**General Instructions :**

- The first 15 minutes is the cool-off time. You may use the time to read and plan your answers.
- Answer the questions only after reading the instructions and questions thoroughly.
- Questions with marks series 1, 2, 3 and 4 are categorised as sections A, B, C and D respectively.
- Five questions are given in each section. Answer any four from each section.
- Answer each question by keeping the time.

**Score****SECTION - A**

(Answer any 4 questions from 1 to 5. Each question carries 1 score.)

- Which of the following molecule can undergo addition reaction ?  
(methane, ethane, propene, butane) 1
- The glass used to make lenses and prisms is \_\_\_\_\_. 1
- Atomic mass of Nitrogen is 14. Which of the following sample contain  $6.022 \times 10^{23}$  Nitrogen atoms ?  
(7 g Nitrogen, 14 g Nitrogen, 28 g Nitrogen, 1 g Nitrogen) 1
- The ore of a metal is lighter than the impurities. Which method is suitable for its concentration ? 1
- A fresh piece of Mg ribbon loses its luster after a few days. This is due to the formation of the compound \_\_\_\_\_. 1

**P.T.O.**

## SECTION - B

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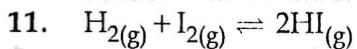
(Answer any 4 questions from 6 to 10. Each question carries 2 scores.)

6. The last subshell of an element is  $3p$  and there are 3 electrons in it.
  - Write the complete electronic configuration of the element.
  - Identify its period and group.
  
7. An iron nail is dipped in  $\text{CuSO}_4$  solution. (Reactivity order  $\text{Fe} > \text{Cu}$ )
  - What is the change that can be noticed on the iron nail after a while ?
  - Write down the chemical equation of the oxidation reaction occurs here.
  
8. 4 g of  $\text{NaOH}$  is dissolved in water and the volume is made upto 1 L.  
(1 mole of  $\text{NaOH} = 40$  g)
  - Calculate the molarity of the resultant solution.
  - How will you make 1 M solution of  $\text{NaOH}$  using the same amount (4 g) of  $\text{NaOH}$  ?
  
9. Concentrated  $\text{Cu}_2\text{S}$  is converted into oxide by roasting.
  - Write the process of roasting.
  - How impurities like sulphur and phosphorus are removed in this process ?
  
10. Ethanoic acid is an organic compound having industrial values.
  - How ethanoic acid is manufactured industrially ?
  - Give any one use of ethanoic acid.

## SECTION - C

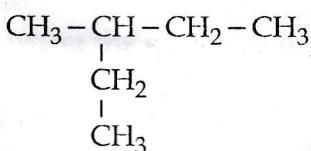
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(Answer any 4 questions from 11 to 15. Each question carries 3 scores.)



- (a) What is the total number of moles of reactants and products in the above reaction ? 1
- (b) What is the effect of pressure in this reversible reaction ? Explain. 2

12. The structure of a hydrocarbon is given below :



- (a) How many C - atoms are there in the main chain ? Which is the word root ? 1
- (b) Identify the branch and its position number. 1
- (c) Write the IUPAC name of this compound. 1

13. The chemical equation for the manufacture of ammonia is  $\text{N}_2(\text{g}) + 3\text{H}_2(\text{g}) \rightarrow 2\text{NH}_3(\text{g})$

- (a) Complete the following : 1  
 $1 \text{ mol N}_2 + \dots \text{ H}_2 \rightarrow \dots \text{ NH}_3$
- (b) Calculate the amount of  $\text{H}_2$  required to react with 28 g of  $\text{N}_2$  completely. 1  
 [Hint : Molecular mass of  $\text{N}_2 = 28$ ,  $\text{H}_2 = 2$ ]
- (c) What will be the volume of  $\text{NH}_3$  formed at STP, if 22.4 L of  $\text{N}_2$  is completely reacted ? 1

14. Consider the metals and solutions given in the box.

Zn, Mg, Cu, Ag,  $\text{CuSO}_4$  solution,  $\text{MgSO}_4$  solution

- (a) Which of the above metals are to be selected to construct a Galvanic cell ? 1
- (b) Identify the anode and cathode of the cell. 1  
 [Hint : Reactivity order  $\text{Mg} > \text{Zn} > \text{Cu} > \text{Ag}$ ]
- (c) Write the redox reaction taking place in this cell. 1

15. Alumina is mixed with cryolite and subjected to electrolysis to extract aluminium.

- (a) Why cryolite is added to alumina ? 1
- (b) Which are the ions present in alumina ? 1
- (c) Write the equation of the reduction reaction taking place at negative electrode. 1

## SECTION - D

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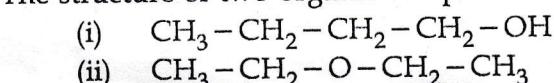
(Answer any four questions from 16 to 20. Each question carries 4 scores.)

16. Zinc piece and zinc powder are taken in two test tubes and equal amount of dil. HCl is added.

- In which test tube does the reaction proceed faster ?
- Give the reason.
- Give an instance from daily life, where such condition is made use.

1  
2  
1

17. The structure of two organic compounds are given below :



- Write the molecular formula of these compounds.
- Which type of isomerism do they exhibit ?
- Explain this isomerism.
- Write the structural formula of a position isomer of compound (i)

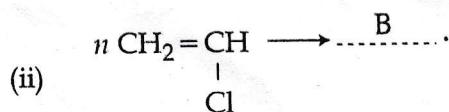
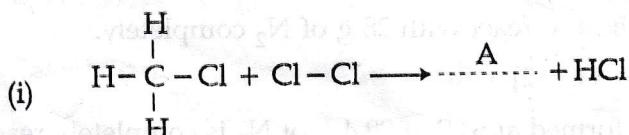
1  
1  
1  
1

18. The atomic number of an element is 19.

- Write the subshell electronic configuration.
- Identify its group, period, block and oxidation state.
- Write any one characteristic of the block to which the element belongs.

1  
2  
1

19. Two organic reactions are given below :



- Identify the products A and B.
- Which type of reaction is (i) ?
- The product B has industrial values. Give its name and use.

1  
1  
2

20. • Aspirin is an antipyretic

- Amoxicillin is an antibiotic

- (a) Give the functions of antipyretics and antibiotics.

- (b) Write any two unhealthy practices among people in using medicines.

2  
2