

SAMAGRA SHIKSHA, KERALA
SECOND TERMINAL EVALUATION 2018-19
CHEMISTRY

Std: IX

Score: 40

Time: 1½ hrs.

General Instructions

- First 15 minutes is given as cool-off time. This time is to be spent for reading the question paper.
- Answer according to the instructions
- Answer the questions considering the score and time.

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

(4x1=4)

1. Fill up suitably.
Mendeleev's Periodic table : Atomic mass
Modern Periodic table :
2. To which period does lanthanoids belong?
3. The moderator used in a nuclear reactor is
4. One main substance causing the depletion of ozone layer is
5. The most abundant gas in the atmosphere is
(Hydrogen, Oxygen, Nitrogen, Argon)

Answer any 4 questions from 6 to 10. Each question carries 2 scores. (4x2=8)

6. Correct the wrong statements if any, of the following.
 - a) Atomic size decreases down a group.
 - b) Ionisation energy decreases as atomic size increases.
 - c) Electropositive nature of metals is high.
 - d) Non-metallic nature generally decreases from left to right across a period.

7. Nitrogen is an inevitable element for plant growth.
- Write down any one method by which atmospheric nitrogen reaches the soil.
 - Write any two other uses of nitrogen.

8. Complete the table

Element	Atomic number	Electronic configuration	Group number
Nitrogen	7	(a)	(b)
Calcium	(c)	2, 8, 8, 2	(d)

9. Formulae of some acids are given

HNO_3	H_3PO_4	H_2SO_4	H_2CO_3	HCl
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- Which among these are dibasic acids?
 - How many types of salts can be formed by a dibasic acid?
10. A few granules of zinc are added to a test tube containing hydrochloric acid.
- Which is the gas formed by the reaction?
 - Which is the product formed when this gas is burnt in air?

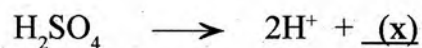
Answer any 4 Questions from 11 to 15. Each question carries 3 Scores.

(4x3= 12)

11. In an atom of the element X, there are three shells and 2 electrons are in its outermost shell.
- Write down the electronic configuration of this element.
 - Find the group and period of this element.
 - What is the valency shown by this element?
12. When a little dilute hydrochloric is added to powdered egg shell, a gas is formed. This gas turns clear lime water milky.
- Name the gas formed.
 - Write the name of the acid formed when this gas is dissolved in water?
 - Give the name of the salt formed when this acid reacts with potassium hydroxide.

13. Hydrogen is known as the fuel of future.
- Write any two advantages of hydrogen as a fuel.
 - Despite these advantages, hydrogen is not usually used as a fuel. Why?

14. a) Complete the following equations.



- Write the formula of the salt formed by the reaction between Ca(OH)_2 and H_2SO_4
15. Heat a test tube containing a little potassium permanganate crystals. Introduce a burning incense stick in the test tube.
- Write down the observation.
 - Name the gas formed.
 - Which is the method used for the industrial preparation of this gas?

Answer any 4 questions from 16 to 20 . Each question carries 4 Scores. (4x4= 16)

16. a) Write down the experimental procedure of the neutralisation reaction between sodium hydroxide and hydrochloric acid.
- Give the equation of the reaction.
 - What will be the pH of the solution after neutralisation?
17. Three atoms are given

Sodium ($_{11}\text{Na}$) Phosphorus ($_{15}\text{P}$) and Chlorine ($_{17}\text{Cl}$)
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- Which among these is the most electronegative atom?
- Which atom has the lowest ionisation energy?
- What are the factors on which ionisation energy depends?

18. The colour of wet flower petals is found to fade when they are dropped in a jar filled with chlorine.
- Give the name of this process?
 - Choose the chemicals from the bracket which are needed to prepare chlorine in the laboratory.
(Zn, KMnO_4 , Con. HCl, NaCl, Con. HNO_3)
 - Name the substance through which the gas is passed to remove the traces of water vapour formed along with chlorine.
 - Name a compound of chlorine used in the purification of water.
19. pH values of certain substances are given.

A = 1	B = 6	C = 7	D = 9	E = 14
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- Which of these is the strongest alkali?
 - One among these is potassium chloride solution. Identify.
 - Give any two properties of compounds belonging to the category of 'A'.
 - Name a substance commonly added to soil when the pH of the soil decreases.
20. Electronic configuration of elements A, B, C and D are given.

A	:	2, 7
B	:	2, 8, 1
C	:	2, 8, 8
D	:	2, 8, 7

- Name the family of elements to which 'A' belongs.
- Which among the above is a noble gas?
- Which of the elements belong to the same group?
- Give the formula of the compound formed by A and B.