BOARD OF SECONDARY EDUCATION KARACHI
MODEL QUESTION PAPER
S.S.C. (ANNUAL) EXAMINATIONS 2021 for IX, 2022 for X & ONWARDS
CHEMISTRY (THEORY) (Class IX)
SCIENCE GROUP

Total Time: 3 Hours   **(Total Marks: 60)**

General Instructions:

Section 'A': It consists of 12 Multiple choice questions (MCQs) and all of them are to be answered.

Section 'B': It consists of 15 short answer questions of which 10 questions are to be answered.

Section 'C': It comprises 05 Descriptive answer questions of which 03 questions are to be answered.

SECTION 'A' (COMPULSORY) MULTIPLE CHOICE QUESTIONS (MCQs)

Time: 30 Minutes   **(Marks: 12)**

NOTE:

i.   **Attempt all questions from this section.**

ii.   **Do not copy down the question. Write only the answer against the proper number of the question**

iii. **Each question carries One mark.**

iv.   **Write the Code of your question paper in bold letters at the beginning of the answer script.**

1) **Choose the correct answer from the given options:**

i.   The best disinfectant is:
   • Chlorine   • Iodine   • Sulphur   •Sodium

ii.   44 a.m.u of CO_2 is equal to
   • molar mass   • atomic mass   • molecular mass   • mass number

iii. The lightest particle among the following is:
   • Electron   •Proton   • Neutron   • Alpha

iv.   Which pair of elements is chemically similar?
   • K & Cr   • Cu & Ca   • F & Cl   • N & O

v.   It is a non polar molecule:
   • HCl   •NH_3 • H_2 •H_2O

vi.   The process in which solid directly changes to gas:
   •Evaporation   • Melting   • Sublimation   • Boiling point

vii. The formula of washing soda is:
   • $Na_2CO_3.6H_2O$ • $Na_2CO_3.10H_2O$ • $NaHCO_3$ • $NaOH$

viii. An acid that produce large number of hydrogen ions in aqueous solution is called:
   •strong acid   • strong base   • weak acid   • weak base

ix.   2,8,1 is the electronic configuration of:
   •Magnesium   •Sodium   •Calcium   •Potassium

x.   The only liquid metal is:
   •Molybdenum   • Gold   • Mercury   •Bromine

xi. $_6C^{14}$ has the neutrons:
   • 6   • 8   • 10   •12

xii. Along the period from left to right, which one of the following tendency decreases?
   •Atomic radius   • Ionization energy   •Electron Affinity   •Electro negativity

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Time: 2½ hours   SCIENCE GROUP   **Marks: 48**

Important Instructions:

This paper consists of Short-Answer questions (Section 'B') and Descriptive Answer questions (Section 'C') will be given after 3o minutes and its total duration will be 2 ½ hours only.

SECTION 'B' (SHORT-ANSWER QUESTIONS)   (Marks: 10x3=30)

NOTE: Answer any Ten (10) questions from this section. All questions carry equal marks.

2) Define chemistry and explain any two branches of Chemistry.
3) Balance the following chemical equations:
   a) $H_2 + O_2 \rightarrow H_2O$
   b) $N_2 + H_2 \rightarrow NH_3$
   c) $KClO_3 \rightarrow KCl + O_2$
4) Define chemical reaction and explain decomposition reaction with the help of an example.
5) Calculate number of moles in 50 g of H_2O.
6) What is Radioactivity? Write two properties of α-rays.
7) Write down the characteristics of group VII-A elements.
8) If an element contains two shells only and its outer shell contains five electrons. Predict its group and period. Also write the name of the element.
9) Write three differences between covalent bond and co-ordinate covalent bond.
10) Define the following terms:
   i. Molarity   ii. Diffusion   iii. Metalloids
11) Define pH. Calculate the pH of 0.01 M HCl solution.
12) Write down three uses of Baking soda.
13) What is Double Salt? Write the chemical formulae of any two double salts.
14) Define Electrolysis and write any two advantages of it.
15) Write down one contribution of following scientist.
   i.Jabir bin Hayyan   ii. Al-Razi   iii. Robert Boyle
16) Write three general characteristics of the Transition elements.

SECTION 'C' (DESCRIPTIVE-ANSWER QUESTIONS)   (Marks: 3x6=18)

Note: Attempt any three (3) questions from this section. All questions carry equal marks:

17) State the law of conservation of mass. Describe Landolt's experiment to verify the law.   (6)

18) What is salt? Name its types on the basis of chemical properties with two examples each.   (6)

19) What is meant by Ionic bond? Describe the formation of Ionic bond in Sodium Chloride.   (6)

20) State Mendeleev's Periodic law and Modern Periodic law and write two salient features of Mendeleev's Periodic Table.   (6)

21) Describe Rutherford's Experiment which led him to the discovery of the nucleus of an atom.   (6)

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