

SEMESTER—ONE

CHEMISTRY

Class XII

Sample Paper—1

Max. Marks: 50

Time Allowed: 90 minutes

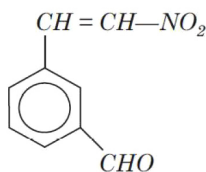
General Instructions:

- (i) This question paper consists of 40 questions in 4 sections.
- (ii) Section A consists of 10 Objective type questions carrying 1 mark each.
- (iii) Section B consists of 10 Fill in the blanks type questions carrying 1 mark each.
- (iv) Section C consists of 10 True or False statement type questions carrying 1 mark each.
- (v) Section D consists of 10 Short answer type questions carrying 2 marks each.

Section A

Select and write one most appropriate option out of the four options given for each of the questions 1–10.

1. Name the functional group of the compound.



- (a) —CO—
- (b) —NH₂
- (c) —CHO
- (d) None of these

2. In a court case, it was suspected that some changes have been made in the documents. The forensic department was asked to check the ink used at two different places. Which of the following technique can give the best results?
- (a) Column chromatography
 - (b) Solvent extraction
 - (c) Distillation
 - (d) Thin layer chromatography.
3. IUPAC name of iso-Butane is:
- (a) 2-Methylpropane
 - (b) 2-Methylbutane
 - (c) 2, 2-Dimethylpropane
 - (d) None of these.
4. Alcohols are the compounds containing one or more
- (a) Carboxyl group
 - (b) Hydroxyl group
 - (c) Carbonyl group
 - (d) Nine of these
5. $R-OH$ is the general formula of
- (a) Alkanols
 - (b) Aldehydes
 - (c) Ketones
 - (d) one of these
6. Which of the following industry is not related to chemical industry?
- (a) Fertilizer
 - (b) Refineries
 - (c) Pesticide
 - (d) None of these
7. The branch of chemistry which deals with the study of various chemical phenomena occurring in the environment is called
- (a) Biological chemistry
 - (b) Inorganic chemistry
 - (c) Environmental chemistry
 - (d) Physical chemistry
8. Which of the following is a natural constituent of the atmosphere and is vital to all forms of plant life?
- (a) CO_2
 - (b) SO_2
 - (c) NO_2
 - (d) None of these
9. The similarity in the properties of alkali metals is due to:
- (a) their same atomicity
 - (b) similar outer shell configuration
 - (c) same energy of outershell
 - (d) same principal quantum number of outer shell.
10. The formula of soda ash is:
- (a) Na_2CO_3
 - (b) $Na_2CO_3 \cdot 5H_2O$
 - (c) $Na_2CO_3 \cdot 10H_2O$
 - (d) $Na_2CO_3 \cdot 2H_2O$.

Section B

Fill in the blanks with a suitable word for each of the questions 11–20.

- 11.** 1. is a process of solidification of a pure substance from its dissolved state.
- 12.** is a process of conversion of liquid into vapours by heating followed by condensation of vapours so produced by cooling.
- 13.** is the technique of separating the constituents of a mixture by the differential movement of individual components through the stationary phase under the influence of mobile phase.
- 14.** In alcohols, is the functional group.....
- 15.** Alcohols behave as because of the presence of polar O—H group.
- 16.** In haloalkanes, the halogen atom is bonded to carbon atom.
- 17.** In the Liberia was one of the biggest exporters of iron-ore.
- 18.** produces adverse effect on living as well as non-living materials.
- 19.** constitutes about 80% of the earth's surface.
- 20.** Sodium is electropositive than potassium.

Section C

State whether the following statements are true or false for each of the questions 21–30.

- 21.** Recrystallisation is used to purify liquids.
- 22.** Functional distillation is used to separate substance of different molar masses.
- 23.** Light oil has API gravity higher than 31.1°
- 24.** Aldehydes and ketones are position isomers.
- 25.** Ethers may be used as solvent because they react only with acid reactant .
- 26.** Fertilise industry is not related to chemical industry.
- 27.** Radioactivity is a cause of water pollution.
- 28.** Biotechnology may help some people in developing countries who need help more food.
- 29.** Alkali metals are generally extracted by electrolysis of their ores.
- 30.** Sodium is more electropositive than magnesium.

Section D

Answer each of the questions 31–40.

- 31.** What is petroleum?
- 32.** What is breaking process?
- 33.** What happens when calcium is burnt in air?
- 34.** What is crystallisation?
- 35.** Write some different categories of subdivision of isomerism.
- 36.** Define organic chemistry.
- 37.** List at least 2 characteristics of organic compounds.
- 38.** Write the name two most important alcohols.
- 39.** Write any five major water pollutants.
- 40.** What are soil pollutants?