

SEMESTER—ONE

CHEMISTRY

Class XII

Sample Paper—2

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. Octane number of *n*-Heptane is
 - (a) 0
 - (b) 85
 - (c) 100
 - (d) None of these.
2. This type of hydrocarbon contains at least one Benzene ring.
 - (a) Aldehyde
 - (b) Ketone
 - (c) Aromatic
 - (d) None of these.
3. Which of these are most important alkanols?
 - (a) Ethanol
 - (b) Methanol
 - (c) Both (a) & (b)
 - (d) None of these

4. Which of these has been used as inhalation anaesthetic?
(a) Dimethyl ether (b) Diethyl ether
(c) Ethoxy ethane (d) None of these
5. This polymer is also known as styrene butadiene rubber.
(a) Buna-S (b) Teflon
(c) Styron (d) None of these
6. Which of the following is a cause of water pollution?
(a) Deforestation (b) Use of pesticides
(c) Radioactive substances (d) None of these
7. Goals of biotechnology in plants include making plants
(a) stronger (b) more productive
(c) more nourishing (d) all of the above
8. Biotechnology may help some people in developing countries who need
(a) vaccinations and disease prevention
(b) better nutrition
(c) more food
(d) all of the above
9. On dissolving moderate amount of sodium metal in liquid NH_3 at low temperature, which one of the following does not occur?
(a) Blue coloured solution is obtained.
(b) Na^+ ions are formed in the solution.
(c) Liquid ammonia becomes good conductor of electricity.
(d) Liquid ammonia remains diamagnetic.
10. A metal M readily forms water soluble sulphate MSO_4 , water insoluble hydroxide $\text{M}(\text{OH})_2$ and oxide MO which becomes inert on heating. The hydroxide is soluble in NaOH. Then M is:
(a) Be (b) Mg
(c) Ca (d) Sr.

Section B

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

11. is the phenomenon by virtue of which two or more compounds having same molecular formula can be assigned different molecular structures.
12. Alkanes are hydrocarbons.

13. The molecular formula of sucrose is
14. In Buna-S, S stands for
15. Substances which are used to kill or block the reproduction processes of unwanted organisms is called
16. pH of acid rain lies below
17. Main constituents of acid rain are
18. The oxide of nitrogen is not present in atmosphere is
19. Alkaline earth metals are reducing agents than alkali metals.
20. The most abundant alkaline earth metal is

Section C

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

21. Aromatic hydrocarbon contains at least one Benzene ring.
22. Alkanes are saturated hydrocarbons.
23. Alkaline hydrolysis of an ester is called Neutralisation.
24. Acid catalysed hydration of alkenes does not result in the production of alcohol.
25. An aryl carbon can be found in phenol.
26. Goals of biotechnology in plants include making plants stronger.
27. Greenhouse effect results in global warming.
28. Biotechnology may help some people in developing countries who need more food.
29. Caesium is the lightest alkali metal.
30. In Castner-Kellner cell, sodium hydroxide is formed in the central compartment.

Section D

Answer each of the questions 31–40.

31. What is petroleum composition?
32. What is Alkyl radical?
33. What happens when quick lime is heated with silica?
34. What is partition chromatography?
35. What is bubble tower?
36. Name 3 methods used to separate and purification of organic compounds.

37. What is distillation?
38. How air pollution can be controlled?
39. Define biotechnology.
40. What happens when metal is dropped into water?