

AP-2020
Grade 12
Chemistry Paper-II

Time: 3Hours

Max. Marks: 60

Note: Read the following instructions carefully:

- (1) Answer all question of section-A Answer any six-question **Section “B”** ad any four question from Section – “C”
- (2) In **Section - “A”** question from sr. Nos. 1 to 10 are of “very short answer type”. Each question carries two marks. Every answer may be limited to two or three sentences. Answer all these question at one place in the same order.
- (3) In **Section - “B”**, question from Sr. Nos 11 to 18 are of “short answer type” Each question Carries four marks. Every answer may be limited to 75 word
- (4) In **Section – “C”**, question from Sr. Nos. 19 to 21 are of “Long answer type “. Each question carries eight marks. Every answer may be limited to 300 words.
- (5) Draw labelled diagrams, wherever necessary for question in **Section-“B”** and **Section – “C”**

SEACTION-A

10 × 2 = 20

Note: Answer all questions:

1. what are artificial sweetening agents? Give example.
2. what is Zeigler-Natta Catalyst?
3. Name two most familiar antioxidants used as food additives.
4. Write names of the monomers used for getting the polymers
 - (a) Bakelite
 - (b) Glyptal
5. What are colligative properties? Give any one.
6. Identify the reaction order from each of the following rate constants:
 - (a) $K. = 2.3 \times 10^{-5} \text{ L mol}^{-1}$
 - (b) $K = 3 \times 10^{-4} \text{ s}^{-1}$
7. what is the role of cryolite in the metallurgy of aluminum?
8. Why Zn^{2+} is diamagnetic whereas Mn^{2+} Paramagnetic?
9. Complete the following:
 - (a) $\text{XeF}_4 + \text{O}_2\text{F}_2 \rightarrow$
 - (b) $\text{XeF}_2 + \text{H}_2\text{O} \rightarrow$
10. Give the hybridization of Sulphur in the following:
 - (a) SO_2
 - (b) SO_3
 - (c) SF_4
 - (d) SF_6

SECTION-B

6×4=24

Note: Answer any six questions:

11. (a) What are amino acids? Give two examples.
(b) Write any two differences between Globular and fibrous proteins.
12. Explain the following with one example for each
(a) Wurtz reaction,
(b) Fitting reaction
13. Explain Werner's theory of co-ordination examples. compounds with suitable example
14. How does PCl_5 react with the following?
(a) water
(b) $\text{C}_2\text{H}_5\text{OH}$
(c) CH_3COOH
(d) Ag
15. Define the following with suitable examples
(a) Anti-ferromagnetism
(b) Frenkel defect
16. State Henry's law Calculate the mass of a non-volatile solute (molar mass 40 g mol^{-1}) which should be dissolved in 114 g of octane to reduce its Vapour pressure to 80%
17. What is catalysis? How is catalysis classified? Gave one example for each of catalysis.
18. Write any two ores of the following metals:
(a) Aluminum

- (b) Zinc
- (c) Iron
- (d) Copper

SECTION-C

2 × 8 = 16

Note: Answer any two question:

19. (i) Explain the following with suitable examples:
- (a) Conversion of alkylalane to ether
 - (b) Conversion of phenol to salicylic acid
- (ii) (a) How do you prepare carboxylic acid and alcohols from
- (b) What is carbylamines reaction? Give example.
20. (i) State Faraday's first and second law of electrolysis.
A solution of CuSO_4 is electrolyzed for 10 minutes with a current of 1.5 amperes.
What is the mass of copper deposited at the cathode?
- (ii) What is molecularity of a reaction order of a reaction? Name one the bimolecular and One trimolecular gaseous reactions.
21. (i) How does chlorine react with
- (a) acidified FeSO_4 ?
 - (b) dry slaked lime?
- (ii) Describe the manufacture of H_2SO_4 by contact process.