

# CAREERS360

## AP Intermediate 2st Year Chemistry Question Paper (September 2021)





Total No. of Questions - 21

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Total No. of Printed Pages - 3

No.

**Part - III**  
**CHEMISTRY, Paper-II**  
**(English Version)**

Time : 3 Hours ]

[ Max. Marks : 60

**Note :** Read the following instructions carefully :

- (1) Answer all questions of Section - 'A'. Answer any six questions from Section - 'B' and any two questions from Section - 'C'.
- (2) In Section - 'A', questions 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 questions at one place in the same order.
- (3) In Section - 'B', questions from Sr. Nos. 11 to 18 are of "Short answer type". Each question carries four marks. Every answer may be limited to 75 words.
- (4) In Section - 'C', questions 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 questions in Section - 'B' and Section - 'C'.

**SECTION - A**

**Note :** Answer all questions :

**$10 \times 2 = 20$**

1. What is Schottky defect ?
2. What are Isotonic solutions ? Give an example.
3. Write the integrated equation for a first order reaction in terms of  $[R]$ ,  $[R]_0$  and 't'.
4. Give examples of colloidal system of :
  - (a) Liquid in solid
  - (b) Gas in solid

5. Nitrogen molecule is highly stable – Why ?
6. Write any two uses of argon.
7. What is Ligand ? Give an example.
8. What are reducing sugars ?
9. Explain Fittig reaction with an example.
10. What is carbylamine reaction ?

### SECTION – B

Note : Answer any six questions :

$6 \times 4 = 24$

11. Derive Bragg's equation.
12. Vapour pressure of water at 293 K is 17.535 mm Hg. Calculate the vapour pressure of the solution at 293 K when 25 g of glucose is dissolved in 450 g of water.
13. Define order of reaction and molecularity of reaction. Write the differences between them.
14. What is adsorption ? Give any three differences between physical adsorption and chemical adsorption.
15. How does ozone react with the following :
  - (a) PbS
  - (b) KI
  - (c)  $C_2H_4$
  - (d) Hg
16. Explain Werner's theory of coordination compounds with suitable examples.
17. Write a brief note on the structure of glucose.
18. Explain the mechanism of Nucleophilic bimolecular substitution ( $S_N2$ ) reaction with one example.

## SECTION - C

Note : Answer any two questions :

$2 \times 8 = 16$

19. (a) Explain the working of a galvanic cell with a neat sketch taking Daniel cell as example.  
(b) State and explain Kohlrausch's Law of independent migration of ions.
20. How is chlorine prepared in laboratory ? How does it react with the following :  
(a) Cold, Dil. NaOH  
(b) Hot, Conc. NaOH  
(c)  $\text{NH}_3$ (excess)  
(d)  $\text{NH}_3$  with excess  $\text{Cl}_2$
21. Describe the following :  
(a) Reimer - Tiemann reaction  
(b) Williamson's Ether synthesis  
(c) Cross aldol condensation reaction  
(d) Decarboxylation reaction

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