



123

III

Total No. of Questions : 21

Total No. of Printed Pages : 2

Reg. No.

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Part – III
CHEMISTRY
Paper – I
 (English Version)



Time : 3 Hours

Max. Marks : 60

Question Booklet St. No.

Note : Read the following instructions carefully :

- (i) Answer **ALL** questions of **Section – A**. Answer **ANY SIX** questions out of **Eight** questions from **Section – B** and answer **ANY TWO** questions out of **Three** questions from **Section – C**.
- (ii) 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 at **One** place in the **same** order.
- (iii) 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.
- (iv) 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.
- (v) Draw labelled diagrams wherever necessary for questions in **Section – B** and **Section – C**.

SECTION – A**(10×2=20)****Note :** Answer **ALL** questions :

1. Name two adverse effects caused by acid rains.
2. What is Lewis acid ? Give one example.
3. Give the values of gas constant R in different units.



4. What happens when magnesium metal is burnt in air ?
5. How many number of moles of glucose are present in 540 gms of glucose ?
6. What are the ΔH sign conventions for exothermic and endothermic reactions ?
7. Write the conformations of ethane.
8. State the Hess's Law of Constant Heat Summation.
9. Why is Gypsum added to Cement ?
10. What is Chemical Oxygen Demand (COD) ?



SECTION - B

(6×4=24)

Note : Answer ANY SIX questions :

11. Write a few lines on the utility of hydrogen as a fuel.
12. Explain the difference in properties of diamond and graphite on the basis of their structure.
13. State Fajan's rules and give suitable examples.
14. Deduce (a) Graham's law and (b) Dalton's law from Kinetic gas equation.
15. What is Le Chatelier's principle ? Discuss the application of Le Chatelier's principle for the industrial synthesis of Ammonia.
16. Chemical analysis of a carbon compound gave the following percentage composition by weight of the elements present, carbon = 10.06%, hydrogen = 0.84%, chlorine = 89.10%, calculate the empirical formula of the compound.
17. Write any two methods of preparation of diborane.
18. Explain the formation of coordinate covalent bond with one example.



SECTION - C

(2×8=16)

Note : Answer ANY TWO questions :

19. Describe two methods of preparation of ethane. Give any three reactions of ethane.
20. What are the postulates of Bohr's model of hydrogen atom ? Discuss the importance of this model to explain various series of line spectra in hydrogen atom.
21. Write an essay on s, p, d, f block elements.

