



**CHEMISTRY QUESTION BANK**  
**CHAPTER 1: METALLURGY**

**+2 CHEMISTRY**

**TIME: 1.45 hrs**

**Max. Marks: 50**

**I. Answer all the questions:**

**10x1=10**

1. The chemical composition of *siderite* is  
(a)  $Fe_2O_3$  (b)  $FeCO_3$  (c)  $FeS_2$  (d)  $Fe_2O_3 \cdot 3H_2O$
2. Ruby silver is  
(a)  $Ag_2S$  (b)  $Ag_3SbS_3$  (c)  $AgCl$  (d)  $Ag_3SbS_4$
3. Which among the following is used in *cutting* tools and crushing machines?  
(a) stainless steel (b) Nickel steel (c) Chrome steel (d) Cadmium steel
4. Elements such as Germanium, Silicon and Gallium are used as  
(a) conductors (b) semiconductors (c) insulators (d) super conductors
5. Zinc and mercury can be refined by  
(a) Distillation (b) Liquefaction (c) Electrolytic refining (d) Zone refining
6. The *Sulphide* ore of Iron is  
(a) *Haematite* (b) Magnetite (c) Siderite (d) *Iron pyrite*
7. Which of the metal is extracted by Hall-Heroult process?  
(a) Al (b) Ni (c) Cu (d) Zn
8. Wolframite ore is separated from tinstone by the process of  
(a) smelting (b) calcination (c) Roasting (d) Electromagnetic separation
9. Which one of the following ore is best concentrated by froth floatation method?  
(a) magnetite (b) *Haematite* (c) *Galena* (d) Cassiterite
10. In the electrolytic refining of copper, which one of the following is used as anode?  
(a) Pure copper (b) impure copper (c) carbon rod (d) *Platinim* electrode

**II. Answer the following questions.**

**5x2=10**

11. Differentiate between minerals and ores.
12. Define the term (i) *Gangue* (ii) slag
13. What is auto reduction? Give example
14. What is liquation?
15. Explain the role of  $NaCN$  in froth floatation process.

**III. Answer all the questions:**

**5x3=15**

16. Write a note on froth floatation process.
17. Define the terms Roasting and calcination.
18. Write a note on gravity separation method.
19. Explain the extraction of Cr from  $Cr_2O_3$  by aluminothermic process.
20. List the observation from the Ellingham diagram.

**IV. Answer any THREE questions**

**3x5=15**

21. (a) Explain the refining of Zr by Van-Arkel method.  
(OR)  
(b) Explain the refining of silicon by Zone refining
22. (a) i) What are the limitations of Ellingham diagram?  
ii) Explain the refining of nickel by Mond's process  
(OR)  
(b) Give the applications of copper
23. (a) Write a note on (i) cyanide leaching  
(ii) Alkali leaching  
(OR)  
(b) What is the role of collectors in froth floatation process?
24. (a) Water gas is a reducing agent. Justify.  
(OR)  
(b) How will you separate wolframite impurities from Tin stone by electromagnetic separation method?

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## CHEMISTRY QUESTION BANK

## CHAPTER 2: P-BLOCK ELEMENTS – I

## +2 CHEMISTRY

TIME: 1.45 hrs

Max. Marks: 50

## I. Answer all the questions:

10x1=10

- Which among the following is essential for cell wall of plants?  
(a) Boron (b) Aluminium (c) Carbon (d) Silicon
- Inorganic benzene is  
(a)  $B_2H_6$  (b)  $B_3N_3H_6$  (c)  $B_3N_2O_3$  (d)  $BF_3$
- Which is used as a styptic agent to arrest bleeding?  
(a) Borane (b) Silicone (c) Alum (d) Silicates
- The C-C bond length in graphite is  
(a) 1.39 Å (b) 1.40 Å (c) 1.41 Å (d) 1.42 Å
- Synthetic gas is  
(a)  $CO + H_2$  (b)  $CO_2 + H_2$  (c)  $CO + H_2O$  (d)  $CO_2 + H_2O$
- Ortho Silicates are also called as  
(a) Soro Silicates (b) Ring Silicates (c) Neso Silicates (d) Pyroxenes.
- In diborane, the number of electrons that accounts for banana bonds is  
(a) Six (b) two (c) four (d) three
- Oxidation state of Carbon in its hydrides is  
(a) +4 (b) -4 (c) +3 (d) +2
- Carbon atoms in fullerene with formula  $C_{60}$  have  
(a)  $sp^2$  hybridized (b) sp hybridized (c)  $sp^3$  hybridized (d) none of these
- The stability of +1 oxidation state increases in the sequence:  
(a)  $Al < Ga < In < Tl$  (b)  $Tl < In < Ga < Al$   
(c)  $In < Tl < Ga < Al$  (d)  $Ga < In < Al < Tl$ .

## II. Answer the following questions.

5x2=10

- What is catenation?
- What is inert pair effect?
- Give the uses of Boric acid.
- How is Potash alum prepared?
- Silicones are called as high temperature polymers. Why?

## III. Answer all the questions:

5x3=15

- Discuss the structure of diborane in detail.
- Write a note on fullerenes.
- Differential between Graphite and Diamond.
- How will you identify Borate radical?
- (a) What is Fischer Tropsch process.  
(b) Draw the structure of cyclic silicates.

## IV. Answer all the questions

3x5=15

- (a) (i) Explain pyroxenes and amphiboles with a neat diagram.  
(ii) Give the uses of Silicones.

(OR)

- (b) (i) Write a note on Zeolites. (ii) Write a note on hydroboration.
- (a) (i) How is borax prepared from colemanite? (ii) What is burnt alum?

(OR)

- (b) What is catenation? What are the conditions essential for catenation.
- (a) (i) What is Mc Afee process? (ii) Bric acid is a weak monobasic acid. Why?

(OR)

- (b) (i) Draw and explain the structure of Boric acid (ii) Write a note on graphenes.

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# +2 CHEMISTRY



## QUESTION BANK



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1. Chapterwise question paper – 15
2. Public model question paper – 5
3. Govt. public exam question paper – 5  
(April & June 2023, 2024, April 2025)

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