

CLASS : XII
SUBJECT : CHEMISTRY

UNIT TEST - I
(METALLURGY)

TIME : 1.00 hr
MARKS : 40

PART-I

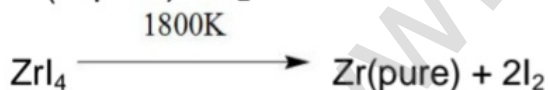
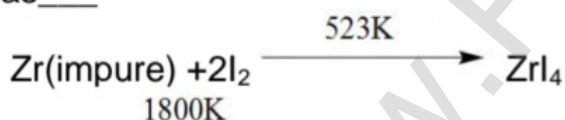
CHOOSE THE CORRECT ANSWER :

10 X 1 = 10

- wolframite ore is separated from tinstone by the process of ____
(a) electromagnetic separation. (b) smelting
(c) calcination (d) Roasting
- the incorrect statement among the following is
(a) Nickel is refined by mond's process
(b) Titanium is refined by van-Arkel's process
(c) Zinc blende (ZnS) is connected by froth floatation process
(d) In the metallurgy of gold the metal is leached with dilute sodium chloride solution
- Match items in column-I with the items of column- II and assign the correct code

Column-I		Column-II	
(A)	Hydrogen reduction	(i)	ZnO
(B)	Carbon reduction	(ii)	HgS
(C)	Metal reduction	(iii)	AgCl
(D)	Auto reduction	(iv)	B ₂ O ₃
		(v)	Fe ₃ O ₄

- (a) A-iii , B-v ,C -i , D - ii (b) A-iv , B-ii ,C -v , D -iii
(c) A- v , B-iii ,C -i , D - ii (d) A-v , B- i ,C -iv , D -ii
- Extraction of gold involves leaching with cyanide ion Gold is later recovered by :
(a) metal displacement with zinc. (b) Liquation
(c) Distillation (d) Zone refining
 - The following set of reactions are used in refining zirconium. This method is called as ____



- (a) Zone refining (b) Liquation
(c) Mond's process (d) van Arkel process
- Bauxite has the composition :
a) Al₂O₃.nH₂O b) Fe₂O₃.2H₂O
c) Al₂O₃ d) none of the above
 - Zinc is obtained from ZnO by
a) carbon reduction b) reduction using silver
c) Electrochemical process d) Acid leaching
 - The process of conversion of gold complex into elemental gold is ____
(a) Cupellation (b) cementation
(c) liquation (d) concentration

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9. Match :

(1) Cyanide process

(2) Froth floatation process

(3) Electrolytic reduction

(4) Zone refining

(i) Ultrapure Ge

(ii) Extraction of Al

(iii) Dressing of ZnS

(iv) Extraction of Au

(a) (1)-(i), (2)-(ii), (3)-(iii), (4)-(iv) (b) (1)-(ii), (2)-(iv), (3)-(i), (4)-(iii)

(c) (1)-(iv), (2)-(iii), (3)-(ii), (4)-(i) (d) (1)-(iii), (2)-(i), (3)-(iv), (4)-(ii)

10. Which one is used in artificial limb joints ?

(a) Cu

(b) Au

(c) Fe

(d) Zn

PART-II

ANSWER THE FOLLOWING ANY FOUR QUESTIONS.

4 X 2 = 8

11. which type of ores can be concentrated by froth flotation method ? give two examples

12. What are the limitations of elingham diagram ?

13. What are the various steps involved in extraction of pure metals from their ores?

14. Give the uses of zinc.

15. What is auto-reduction ? give example

16. What is the role of quick lime in the extraction of Iron from its oxide Fe_2O_3 ?

PART-III

ANSWER THE FOLLOWING ANY FOUR QUESTIONS.

4 X 3 = 12

(COMPULSORY QUESTION NO : 22)

17. What are the differences between minerals and ores ?

18. Explain the following terms with suitable example

a) Gangue

b) slag

19. Write a note on gravity separation method ?

20. Explain concentration by magnetic separation with diagram

21. What is cementation ?

22. What are the differences between Calcination and roasting ?

PART-IV

ANSWER ALL THE QUESTION

2 X 5 = 10

23.a) Explain zone refining process with an example

(OR)

b) Describe mond process for refining nickel.

24.a) Explain the electrometallurgy of aluminium.

(OR)

b) Explain froth flotation process

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