

METALLURGY

½ Mark Questions

1. What is the ore of Aluminum?
2. Which among these is ore of mercury?
a) Galena b) Cinnabar c) Gypsum d) Zincite
3. Match the following
1) copper Iron pyrites p) ZnS
2) Zinc Blende q) CuFeS₂
3) Magnesite r) MgSO₄.7H₂O
4) Epsom Salt s) MgCO₃
4. Which of the following is the correct formula of gypsum
a) CuSO₄.2H₂O b) CuSO₄.+2H₂O c) CuSO₄.5H₂O d) CaSO₄.2H₂O
5. The metal present in carnallite
i) Potassium ii) Calcium iii) Magnesium iv) zinc
a) Only I b) Both I and ii c) Both i and iii d) i,ii, iii
6. **Statement I** : Sodium is a high reactive metal
Statement II : Mercury is a moderate reactive metal
Which of the statement is correct?
7. High reactivity metal : K : : Moderate reactivity metal
a) Na b) Mg c) Al d) Pb
8. Match the following
1) Magnesite p) Ca
2) Horn Silver q) Mg
3) Lime stone r) Fe
4) Haematite s) Ag
9. What are the metals having high reactivity from the following K,Na,Mg,Zn,Cu,Au
10. The reactivity of metals Al, Ag and Cu decrease in this order
a) Al>Cu>Ag b) Ag>Cu>Al c) Ag>Al>Cu d) Cu>Ag>Al
11. Find the odd one out based on reactivity
a) K b) Na c) Au d) Ca
12. Find odd one based on from the exists.
a) pycnosite b) Magnesite c) Haematite d) Zincite
13. **Assertion (A)** : Bauxite is ore of Aluminium
Reason (R) : Aluminium economically extracted from Bauxite
a) A and R are correct and R is correct explanation of A
b) A and R are corrected and R is not correct explanation of A
c) A is correct and R is incorrect
d) A is incorrect and R is correct
14. Which of these metals occur in native form
a) Pb b) Au c) Fe d) Hg
15. Which of these methods used for extraction of metals at the top of reactivity series
a) Simple reduction of their oxides
b) Electrolysis of their aqueous solutions
c) Electrolysis of their fused compounds
d) All of these

16. Which of the methods used to extract metals in the middle of reactivity series
- Reduction of metal oxides with carbon
 - Reduction of metal oxides with carbon monoxide
 - Auto reduction
 - Reduction of ore by more reactive metals

17. Name the process in which a pure metal is obtained from impure metal?

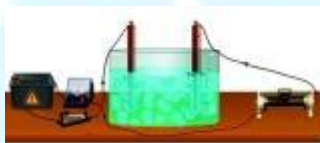
18. The process carried out by using given diagram (Page 290 page 1 old text book)

19. **X** : Galena can be concentrated by using froth floatation process

Y : High reactivity metals can be extracted by electrolysis of their fused compounds.

Which of the statement is correct?

20. The experiment carried out on the figure is



21. Match the following

- | | |
|--------------------------|------------------|
| 1) Distillation | p) Tin |
| 2) Electrolytic refinery | q) Zinc, mercury |
| 3) Liquefaction | r) Copper |

22. Which of these act as reducing agent in thermite process

- | | | | |
|-------|-------|-------|-------|
| a) Al | b) Fe | c) Au | d) Si |
|-------|-------|-------|-------|

23. Mercury : distillation : : _____ : liquation

24. **Assertion (A)** : Zinc can be purified by distillation process

Reason (R) : Zinc has high boiling points compared to impurities

- A and R are correct, R is correct explanation of A
- A and R are correct, R is not correct explanation of A
- A is correct and R is incorrect
- A is incorrect and R is correct.

25. The ores of metals in the middle of activity series generally present in the form of

- | | | | |
|---------------|---------------|----------------|---------------|
| i) Carbonates | ii) Chlorides | iii) Sulphates | iv) Sulphides |
| a) only I | b) i and ii | c) I and iii | d) I and iv |

26. The anode mud formed during electrolysis of acidified copper sulphate is

- | | | | |
|-------------|------------------|----------------|-----------------|
| i) Antimony | ii) Selenium | iii) Tellurium | iv) Silver |
| a) only 1 | b) both I and ii | c) I, ii, iii | d) All of these |

27. What is the name of chemical process in which ore is heated in the absence of air?

28. Which of the following furnaces is useful in carrying smelting

- | | | | |
|----------------|----------------|-----------|----------|
| a) Reverbatary | b) open hearth | c) Retart | d) Blast |
|----------------|----------------|-----------|----------|

29. Which substance is added to remove gangue?

30. In which of the following furnace has both fire box and heart are reperated

- | | | | |
|----------------|----------------|-----------|----------|
| a) Reverbatary | c) Open hearth | c) Retart | b) blast |
|----------------|----------------|-----------|----------|

31. Rusting of Iron : Oxidation : : Smelting : _____

32. **Statement I** : Furnishing of silver to black is due to formation of silver sulphide..

Statement II : Green coating on copper is due to formation of copper oxide

Which of the following statement is correct.

33. **Assertion(A):** Smelting is a pyrochemical process

Reason(R): Chemical process takes place in the presence of heat is called pyrochemical process

- a) Both A and R are correct and R is correct explanation of A
- b) Both A and R correct and R is not correct explanation of A
- c) A is correct and R is incorrect
- d) A is incorrect and R is correct

34. Which of the following is useful to remove acidic gangue

- i) CaO
- ii) MgO
- iii) Na_2O
- iv) SiO_2

35. Which of the following is used as reducing agent in metallurgical process

- i) Coke
- ii) CO_2
- iii) $KMnO_4$
- iv) $K_2Cr_2O_7$

36. Calcination : _____ : : Smelting : blast furnace

37. What is the formula of Rust?

38. Which of the following used to remove basic gangue?

- a) SiO_2
- b) CO_2
- c) P_2O_5
- d) CaO

39. Which of the following represents calcinations

- a) $CaCO_3 \xrightarrow{\Delta} CaO + CO_2$
- b) $2PbS + 2O_2 \rightarrow 2PbO + 2SO_2$
- c) $PbO + C \xrightarrow{\Delta} Pb + CO$
- d) $Fe_2O_3 \cdot 3H_2O \xrightarrow{\Delta} Fe_2O_3 + 3H_2O$

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KEY

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|---------------------------------|---------------------------|---------------------------|-------|
| 1. Bauxite | 2. b | 3. 1-q, 2-p, 3-s, 4-r | 4. d |
| 5. c | 6. Statement I is correct | 7. d | |
| 8. 1-q, 2-s, 3-p, 4-r | 9. K,Na,Mg | 10. a | |
| 11. c | 12. b | 13. a | 14. b |
| 15. c | | | |
| 16. I, ii, iii, iv | 17. Refinery | 18. Froth floatation | |
| 19. Both statements are correct | 20. Electrolytic refinery | | |
| 21. 1-q, 2-r, 3-p | 22. a | 23. Tin or Sn | 24. c |
| 25. d | 26. d | 27. Calcination | 28. d |
| 29. Flux | 30. c | 31. Reduction | |
| 32. Statement I is correct | 32. a | 34. I,ii,iii | |
| 35. I | 36. Reverberatory furnace | 37. $Fe_2O_3 \cdot xH_2O$ | |
| 38. a,b,c | 39. a | | |

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