

CHEMISTRY

BOOKS - MBD NCERT SOLUTIONS

METALS AND NON-METALS

Multiple Choice Questions

1. The gas liberated when magnesium reacts with boiling water is :

A.	Oxygen

B. Hydrogen

C. Carbon dioxide

D. Nitrogen

Answer: B



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2. The most abundant metal in earth's crust is

:

- A. Copper
- B. Iron
- C. Aluminium
- D. Zinc

Answer: C



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3. The metal extracted by the chemical reduction method is :

A. Sodium

B. Zinc

C. Calcium

D. Aluminium

Answer: B



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4. The metal extracted by the electrolysis method is :

- A. Copper
- B. Zinc
- C. Sodium
- D. Iron

Answer: C



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5. The metal can displace zinc from zinc sulphate solution :

- A. Copper
- B. Silver
- C. Iron
- D. Magnesium

Answer: D



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6. The process of heating the concentrated ore in the presence of excess of air and below its melting point is :

A. Calcination

B. Roasting

C. Smelting

D. Hydrolysis

Answer: B



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7. The impurities present in the ore are named

as:

- A. Ore
- B. Slag
- C. Gangue
- D. Flux

Answer: C



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8. The process of heating ore in the absence of air and below its melting point is called:

B. Calcination	
C. Smelting	
D. Sublimation	
Answer: B	
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9. Iron is galvanized by coating it with:	
A. Nickel	

A. Roasting

- B. Copper
- C. Chromium
- D. Zinc

Answer: D



- **10.** Amalgam is an alloy of :
 - A. Copper and zinc
 - B. Metal and mercury

- C. Sodium and potassium
- D. Iron and Carbon

Answer: B



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Very Short Answer Type Questions

- **1.** Give an example of a metal which:
- (i) is a liquid at room temperature :
- (ii) can be easily cut with a knife,

(iii) it is the best conductor of heat:

(iv) is a poor conductor of heat.



2. Explain the meaning of malleable and ductile.



3. Name the most abundant metal in the earth's crust.



4. Which is the most lightest metal known to us?



5. Which non-metal is a good conductor of electricity?



6. What is an amalgam?



7. Which metal is used in semiconductor devices?

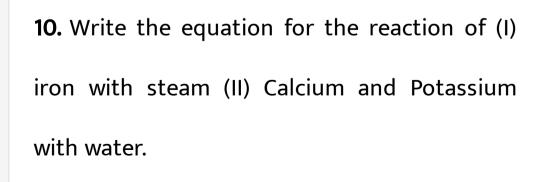


8. Metals generally occur in solid state. Name and write symbol of a metal that exists in

9. What is galvanization?

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Short Answer Type Questions

1. Why is sodium kept immersed in kerosene oil?



2. (i) Write the electron-dot structures for sodium, oxygen and magnesium.

(ii) Show the formation of Na_2O and MgO by the transfer of electrons.



3. Why do ionic compounds have high melting points?



4. Define the terms :

(a) mineral (b) ore and (c) gangue.



5. Name two metals which are found in nature in the free state.



6. What are amphoteric oxides ? Give two examples of amphoteric oxides.



7. Name two metals which will displace hydrogen from dilute acids, and two metals which will not.



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8. In the electrolytic refining a metal M, what would you take as the anode, the cathode and the electrolyte?



9. State two ways to prevent the rusting of iron.



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10. What type of oxides are formed when non-metal combine with oxygen ?



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11. Give reasons:

(a) Platinum, gold and silver are used to make

jewellery.

(b) Sodium, potassium and lithium are stored under oil.

(c) Aluminium is a highly reactive metal, yet it is used to make utensils for cooking.

(d) Carbonate and sulphide ores are usually converted into oxides during the process of extraction.



12. Give the difference between Ore and Mineral



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13. What would you observe when Zinc is added to a solution of iron (II) Sulphate. Write the chemical reaction that takes place.



14. What is rusting? How does (i) the presence of impurities in the metal (ii) presence of electrolyte in water affect rusting?



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15. You must have seen tarnished copper vessels being cleaned with lemon or tamarind juice. Explain why these sour substances are effective in cleaning the vessels.



16. Differentiate between metals and non-metals on the basis of their chemical properties.



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17. Give the reason why copper is used to make hot water tanks but steel (an alloy of iron) is not.



18. What is a thermite reaction (process)?



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19. Differentiate between roasting and calcination.



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20. What are amphoteric oxides ? Give two examples of amphoteric oxides.



21. What is meant by reactivity series of metals

? What is the reason for different reactivities of metals ?



22. What is an alloy? Name the alloys and their constituents used for: (i) making aeroplanes (ii) soldering.



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23. Write electronic configuration of some elements.



24. Why copper articles become green after some time? Name any two alloys of copper.



25. Why silver articles become black after long time? Why pure gold is not used in jewellery?



26. Name the metals which exist in free state and which exist in combined state.



27. Explain the extraction of reactive metals.



28. What happens when metals are burnt in air



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29. Write short note on electrolytic refining of metals.



30. What happens when metals react with acids? Give one example.



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31. What happens when metals react with water? Give one example.



32. What happens when water soluble metals oxides are dissolved in water? Give one example.



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Long Answer Type Questions

1. Differentiate between metals and non-metals (Based on Physical Properties).



2. Discuss the important properties of ionic compounds.



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3. Explain the extraction of metals low in activity series.



4. Explain the extraction of metals in the middle of activity series.



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5. Explain the extraction of metals towards the top of the activity series.



6. What is anodising ? How is it used to prevent aluminium from corrosion ?



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7. Explain reactivity series with example.

