

# Metals and Nonmetals

## ORAL QUESTIONS

### A. Answer these questions orally.

1. Do nonmetals occur in nature in the combined state?
2. Name three noble metals.
3. Are metals sonorous or non-sonorous?
4. Are metallic oxides acidic or basic in nature?
5. Name a nonmetal which is used for water purification.

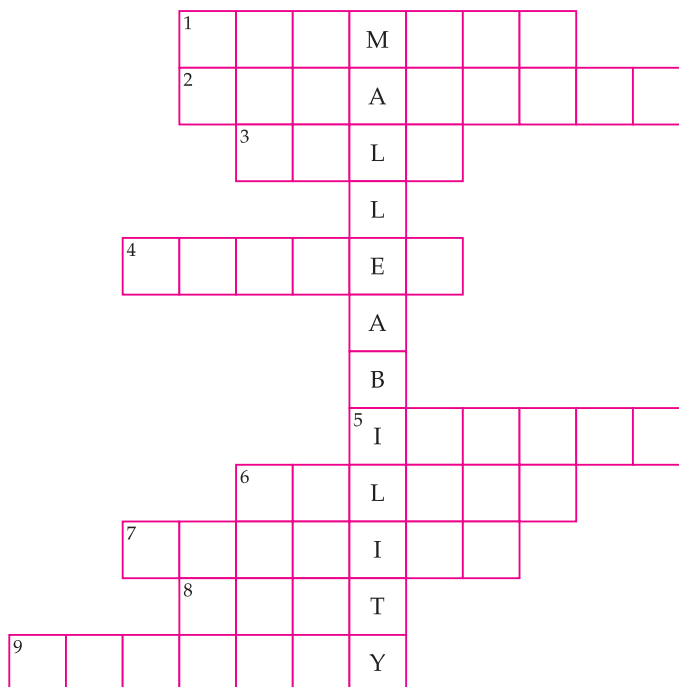
### B. Rewrite the following statements correctly.

1. Nitrogen has antiseptic properties.
2. Silver is used in thermometers.
3. Nonmetals react with dilute acids to produce hydrogen gas.
4. Nitric acid contains nitrogen, carbon and oxygen.
5. Metals are generally soft.

## PUZZLES/QUIZ

### C. Complete the word ladder given below with the help of the given clues.

1. A hard nonmetal
2. A very soft metal
3. A highly ductile metal
4. A nonmetal without which burning is not possible
5. A nonmetal with antiseptic properties.
6. The metal which is the best conductor of electricity.
7. A liquid nonmetal
8. The oxide of iron
9. A liquid metal



## CLASS TEST

### D. MCQ– Tick (✓) the correct option.

1. Which of these is a nonmetal?  
(a) Tin  (b) Gold   
(c) Phosphorous  (d) Silver
2. Which of these is a lustrous nonmetal?  
(a) Iodine  (b) Diamond   
(c) Graphite  (d) All of these
3. Which of these metals can be cut easily with a knife?  
(a) Sodium  (b) Gold   
(c) Copper  (d) Aluminium
4. The only liquid metal is  
(a) Mercury  (b) Bromine   
(d) Silver  (d) Carbon
5. The property of metals by which they can be beaten into thin sheets is called  
(a) Ductility  (b) Malleability   
(c) Sonority  (d) Rusting
6. Which of these is not a good conductor of electricity?  
(a) Gold  (b) Copper   
(c) Sulphur  (d) Aluminium
7. Which of these statement is not true for metals?  
(a) They conduct electricity  (b) They are sonorous   
(c) They are malleable  (d) They are non ductile
8. Sulphurous acid is written as  
(a)  $H_2S$   (b)  $H_2SO_2$    
(c)  $H_2SO_4$   (d)  $H_2SO_3$
9. Which of these metals is very reactive?  
(a) Gold  (b) Silver   
(c) Aluminium  (d) Sodium

10. Metals react with acids to produce
- |                             |                          |                                  |                          |
|-----------------------------|--------------------------|----------------------------------|--------------------------|
| (a) Only metal salts        | <input type="checkbox"/> | (b) Only hydrogen gas            | <input type="checkbox"/> |
| (c) Only carbon dioxide gas | <input type="checkbox"/> | (d) Metal salts and hydrogen gas | <input type="checkbox"/> |
11. Metal oxides are generally
- |                       |                          |                      |                          |
|-----------------------|--------------------------|----------------------|--------------------------|
| (a) Basic in nature   | <input type="checkbox"/> | (b) Acidic in nature | <input type="checkbox"/> |
| (c) Neutral in nature | <input type="checkbox"/> | (d) Any of these     | <input type="checkbox"/> |
12. Which of these reactions will not take place?
- |                                 |                          |
|---------------------------------|--------------------------|
| (a) Copper Sulphate + Zinc      | <input type="checkbox"/> |
| (b) Copper Sulphate + Iron      | <input type="checkbox"/> |
| (c) Copper Sulphate + Aluminium | <input type="checkbox"/> |
| (d) Copper Sulphate + Silver    | <input type="checkbox"/> |
13. Sodium reacts with water to produce
- |   |                          |
|---|--------------------------|
| (a) Sodium oxide and hydrogen           | <input type="checkbox"/> |
| (b) Sodium hydroxide only               | <input type="checkbox"/> |
| (c) Sodium hydroxide and hydrogen gas   | <input type="checkbox"/> |
| (d) Sodium oxide and carbon dioxide gas | <input type="checkbox"/> |

**E. Very short answer questions.**

1. Name the nonmetal used for water purification.

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2. Name the nonmetal used to preserve food.

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3. Name the nonmetal found in vitamins, carbohydrates, fats, proteins, etc.

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4. Name the nonmetal which is very essential for life.

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5. Name two metals used in making jewellery.

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6. What is the nature of metallic oxides?

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7. What is the nature of nonmetallic oxides?

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8. Name the liquid nonmetals.

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9. Name the liquid metal.

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**F. Short answers questions.**

1. What do you understand by the following terms?

(a) Malleability

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(b) Ductility

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2. What is a displacement reaction?

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3. What is reactivity series of metals?

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**G. Long answer questions.**

1. List the various uses of metals.

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2. List the various uses of nonmetals.

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3. Explain displacement reaction with an example.

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4. Write a note on occurrence of metals and nonmetals.

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### **HOME ASSIGNMENT**

#### **H. Think and answer.**

1. Suman placed a piece of copper wire in a solution of zinc sulphate. He could not notice any change occurring. Why?

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2. Shubham placed a piece of sodium metal very gently in a beaker containing water

(a) What do you think he will observe?

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(b) Write the chemical reaction taking place.

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3. Saksham took two test tubes and labelled them as A and B. In test tube A, he placed a substance 'X' and added dilute hydrochloric acid to it. In test tube B, he placed a substance 'Y' and added dilute hydrochloric acid. He observed a reaction taking place with the evolution of a gas in test tube B. No chemical reaction was observed in test tube A. Which of the substances – X or Y do you think is a metal? Give reason for your answer.

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## WORKSHEET

### **I. Give reasons for the following.**

1. Gold, silver and platinum are used in making jewellery.

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2. Sodium metal is stored under kerosene.

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3. Iodine solution is applied on wounds.

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4. No reaction occurs when a piece of silver is placed in copper sulphate solution.

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