

## Class 10 Chemistry Chapter 3 Metals and Non-metals MCQs

1. The primary ore of aluminium is which of the following?

- a) Kaolinite
- b) Bauxite
- c) Malachite
- d) Cinnabar

**Answer:** b

**Explanation:** Aluminium's primary resource is bauxite. Bauxite is a combination of hydrated iron oxide and hydrated aluminium oxide with the chemical formula  $\text{Al}_2\text{O}_3 \cdot 2\text{H}_2\text{O}$ . Kaolinite is another aluminium resource, although it is less abundant than bauxite, and extracting aluminium from kaolinite is a difficult and expensive procedure.

2. Which of the following is not an appropriate ore for iron extraction?

- a) Hematite
- b) Magnetite
- c) Siderite
- d) Iron Pyrites

**Answer:** d

**Explanation:**  $\text{FeS}_2$  is the chemical formula for iron pyrite. Because iron pyrite is exothermic and poses a safety risk in mines, it is more cost-effective to recover iron from other ores such as magnetite and hematite. Pyrites are generally unstable, and they have the potential to transform into sulphurous minerals.

3. Cinnabar is used to extract which metal?

- a) Zinc

- b) Copper
- c) Iron
- d) Mercury

**Answer:** d

**Explanation:** Cinnabar, commonly known as cinnabarite, is a natural and significant mercury ore having the chemical formula  $\text{HgS}$ . Cinnabar is a hazardous ore that cannot be handled directly due to the presence of high levels of mercury.

4. Aluminium does not have which of the following properties?

- a) Aluminium is a poor conductor of heat and electricity
- b) Aluminium is light in weight
- c) It readily dissolves in HCl
- d) Aluminium is highly resistant to corrosion

**Answer:** a

**Explanation:** Aluminium is a light metal that dissolves easily in HCl. Aluminium has a strong corrosion resistance and is a good heat and electricity conductor.

5. Which of the following isn't a cobalt property?

- a) Cobalt is a lustrous white metal
- b) It is attacked by alkalis
- c) Cobalt is malleable
- d) Cobalt is ductile

**Answer:** b

**Explanation:** Cobalt is a beautiful white metal that resists alkali assault. Cobalt is malleable and ductile. Cobalt has a specific gravity of 8.8.

6. Which one of the following is not a zinc ore?

- a) Limonite

- b) Zincite
- c) Calamine
- d) Franklinite

**Answer:** a

**Explanation:** Zinc ores include zincite, franklinite, zinc blende, and calamine, among others. Galvanization is a procedure that uses zinc. It's also employed in the production of electric cells and alloys.

7. When magnesium is alloyed with which of the following elements, the tendency to break under stress is not reduced?

- a) Aluminum
- b) Silicon
- c) Zinc
- d) Copper

**Answer:** d

**Explanation:** Copper is the correct answer. Magnesium is alloyed with aluminium, silicon, and zinc to minimise the tendency of magnesium to break under stress.

8. Copper and zinc alloy is known as \_\_\_\_\_

- a) Brass
- b) Bronze
- c) Duralumin
- d) Nichrome

**Answer:** a

**Explanation:** Brass is a copper-zinc alloy with a substitutional composition. It has several desirable characteristics, including a low melting point, workability, electrical and thermal conductivity, corrosion resistance, and so on.

9. The main component of Duralumin alloy is \_\_\_\_\_

- a) Copper
- b) Nickel
- c) Iron
- d) Aluminum

**Answer:** d

**Explanation:** Duralumin is an age-hardenable aluminium alloy containing primarily copper, manganese, and magnesium. Duralumin is a lightweight alloy that is frequently used in the aerospace sector.

10. In calamine, what is the zinc concentration?

- a) 98 percent
- b) 94 percent
- c) 86 percent
- d) 74 percent

**Answer:** a

**Explanation:** Calamine has a chemical composition of  $\text{ZnCO}_3$  with a zinc content of 98 percent. It is abundant and can be manufactured artificially in laboratories. It is used in the treatment of pain and itching.