

Mercury Chemistry Questions with Solutions

Q1. Mercury is a ____.

- a.) Metal
- b.) Non-metal
- c.) Metalloid
- d.) All of the above

Correct Answer- (a.) Metal

Q2. The colour of mercury is:

- a.) Purple
- b.) Brown -orange
- c.) Silvery-grey
- d.) Reddish-brown

Correct Answer- (c.) Silvery - grey

Q3. The state of mercury at room temperature is-

- a.) solid
- b.) liquid
- c.) gaseous
- d.) None of the above

Correct Answer- (b.) liquid

Q4. The symbol of mercury is:

- a.) Mg
- b.) Hg
- c.) Me
- d.) M

Correct Answer- (b.) Hg

Q5. What part of the Earth is mercury extracted from?

- a.) The core
- b.) The crust

- c.) The mantle
- d.) The volcanoes

Correct Answer. (b.) The crust

Q6. Does mercury rust?

Answer. Mercury is a relatively inert metal that is highly resistant to corrosion.

Q7. Is mercury combustible?

Answer. Mercury is not flammable. The agent does not burn, but when heated, it can produce corrosive and/or toxic fumes. Fire emits irritant, corrosive, and/or toxic gases.

Q8. State the magnetic character of mercury.

Answer. Mercury is not particularly magnetic at room temperature. It has a very low, negative magnetic susceptibility, which means that when exposed to a magnetic field, it magnetises just a tiny bit in the opposite direction. At room temperature, mercury is said to be a weakly diamagnetic substance.

Q9. Can mercury be considered toxic?

Answer. High levels of mercury exposure can harm people of all ages' brains, hearts, kidneys, lungs, and immune systems. Methylmercury levels in the bloodstream of babies developing in the womb and young children may harm their developing nervous systems, impairing their ability to think and learn.

Q10. Fill in the blank.

The name of the ore of mercury is ____.

Answer. The name of the ore of mercury is Cinnabar. The compound is mercury (II) sulphide with the chemical formula HgS .

Q11. Fill in the blank.

Mercury is also known as ____.

Answer. Mercury is also known as quicksilver.

Q12. What is the atomic mass of mercury?

Answer. The atomic mass of mercury is 200.59 amu.

Q13. What is the name of the alloy of mercury?

Answer. The name of the mercury alloy is amalgam.

Any metal which gets alloyed by mercury is called amalgam. For example - Gold-mercury amalgam, Silver-mercury amalgam etc.

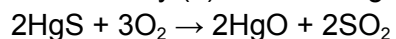
Q14. State the oxidation state of the mercury.

Answer. Mercury usually has an oxidation state of +1 or +2, but it can also have a +4 oxidation state. Mercury behaves like a noble gas due to its electron configuration. Mercury, like noble gases, forms relatively weak chemical bonds with other elements.

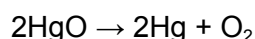
Q15. Explain the extraction of Mercury.

Answer. Cinnabar (HgS) is a mercury sulphide ore. Mercury is a less reactive metal that can be extracted from sulphide ore by simply heating it in the air.

Step 1: It is heated first in the presence of excess air. This is known as roasting. Cinnabar is converted into mercury (II) oxide during this process.



Step 2: The oxide of mercury so formed is heated to around 300°C and it gets reduced to the mercury metal.



Practise Questions on Mercury

Q1. The number of stable isotopes of mercury is-

- a.) seven
- b.) eight
- c.) nine
- d.) ten

Correct Answer- (a.) seven

Q2. The number of neutrons present in the mercury atom is-

- a.) 120
- b.) 121
- c.) 122
- d.) None of the above

Correct Answer- (b.) 121

Q3. State True or False.

Mercury is a man-made chemical.

Answer. False.

Mercury is a naturally occurring metal. It is liquid at room temperature.

Q4. Why is mercury not allowed in aircraft?

Answer. Mercury is generally not permitted on aircraft because it readily combines with aluminium, a metal commonly found on aircraft. The oxide layer protecting the aluminium from oxidation is disrupted when mercury forms an amalgam with aluminium. As a result, aluminium corrodes in the same way that iron rusts.

Q5. State some of the uses of the Mercury element?

Answer. Mercury is used in fluorescent lamps, thermometers, float valves, dental amalgams, medicine, the manufacture of other chemicals, and the production of liquid mirrors. The explosive mercury(II) fulminate is used as a primer in firearms. Thimerosal, an organomercury compound used in vaccines, tattoo inks, contact lens solutions, and cosmetics, is a disinfectant mercury compound.