

PYQs on Elements, Compounds, Molecular Formula and Mixtures

Match List I with List II and select the correct answer using the code given below the Lists :

List I
(Compound)

List II
(Nature)

- | | |
|----------------------|----------------|
| A. Sodium hydroxide | 1. Strong acid |
| B. Calcium oxide | 2. Alkali |
| C. Acetic acid | 3. Weak acid |
| D. Hydrochloric acid | 4. Base |

Code :

- | | A | B | C | D |
|-----|----------|----------|----------|----------|
| (a) | 2 | 3 | 4 | 1 |
| (b) | 2 | 4 | 3 | 1 |
| (c) | 1 | 4 | 3 | 2 |
| (d) | 1 | 3 | 4 | 2 |



Which one of the following elements will *not* react with dilute HCl to produce H_2 ?

- (a) Hg
- (b) Al
- (c) Mg
- (d) Fe



Which one of the following is water gas ?

- (a) Mixture of carbon monoxide and hydrogen
- (b) Mixture of carbon monoxide and nitrogen
- (c) Mixture of carbon dioxide and water vapour
- (d) Mixture of carbon monoxide and water vapour



4. There are six electrons, six protons and six neutrons in an atom of an element. What is the atomic number of the element?

- (a) 6
- (b) 12
- (c) 18
- (d) 24

Match List I with List II and select the correct answer using the code given below the Lists :

List I (Element)	List II (Highest Valency)
A. Sulfur	1. Five
B. Phosphorous	2. Six
C. Lead	3. Two
D. Silver	4. Four

Code :

	A	B	C	D
(a)	2	4	1	3
(b)	2	1	4	3
(c)	3	1	4	2
(d)	3	4	1	2



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ACADEMY**

2. The atomic number of an element is 8.
How many electrons will it gain to form
a compound with sodium?

- (a) One
- (b) Two
- (c) Three
- (d) Four



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Q. Which one of the following is a heterogeneous mixture?

- (a) Hydrochloric acid
- (b) Vinegar
- (c) Milk
- (d) Soda water



What is the formula mass of anhydrous sodium carbonate? (Given that the atomic masses of sodium, carbon and oxygen are 23 u, 12 u and 16 u respectively)

- (a) 286 u
- (b) 106 u
- (c) 83 u
- (d) 53 u

Which compound, when dissolved in water, conducts electricity and forms a basic solution ?

- (a) HCl
- (b) CH_3COOH
- (c) CH_3OH
- (d) NaOH



. Chalk and marble are different forms of

- (a) Calcium hydrogen carbonate
- (b) Calcium carbonate
- (c) Calcium acetate
- (d) Sodium carbonate



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Bronze is an alloy of

- (a) Cu and Zn
- ✓ (b) Cu and Sn
- (c) Zn and Mg
- (d) Fe and Cu



Which one of the following does ***not*** represent the salt, Calcium carbonate ?

- (a) Lime water
- (b) Limestone
- (c) Chalk
- (d) Marble



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Which one of the following substances is *not* a mixture ?

- (a) Tin
- (b) Sea water
- (c) Soil
- (d) Air



Which one of the following is ***not*** a monatomic element ?

- (a) Copper
- (b) Helium
- (c) Iodine
- (d) Barium



Water gas is a mixture of :

- (a) CO_2 and H_2**
- (b) CO and H_2**
- (c) CO_2 and H_2O**
- (d) CO and H_2O**



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Solder is an alloy of

- (a) Cu and Sn.
- (b) Fe and Zn.
- (c) Pb and Sn.
- (d) Ag and Zn.



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Which one of the following is the chemical formula of Washing Soda ?

(a) NaHCO_3

(b) $\text{Na}_2\text{CO}_3 \cdot 10\text{H}_2\text{O}$

(c) $\text{Na}_2\text{CO}_3 \cdot 5\text{H}_2\text{O}$

(d) NaOH



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. Which one of the following elements is used in pencil-lead ?

- (a) Zinc
- (b) Lead
- (c) Carbon (Graphite)
- (d) Tin



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• Which one of the following elements corrodes rapidly ?

- (a) Aluminium
- (b) Iron
- (c) Zinc
- (d) Silver





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• Which one of the following elements forms highest number of compounds ?

- (a) Oxygen
- (b) Hydrogen
- (c) Chlorine
- (d) Carbon



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Q. Which one of the following elements is least reactive with water ?

- (a) Lithium
- (b) Sodium
- (c) Potassium
- (d) Cesium