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Test concept Chemistry الملف

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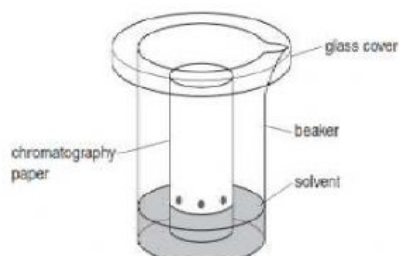
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KVS ZIET BHUBANESWAR
INTERACTIVE WORKSHEET
SUBJECT: CHEMISTRY
STANDARD: XI & XII

For each question there are four possible answers A, B, C and D.
 Choose the one you consider correct.

1. Amino acids are colourless and can be separated and identified by chromatography.

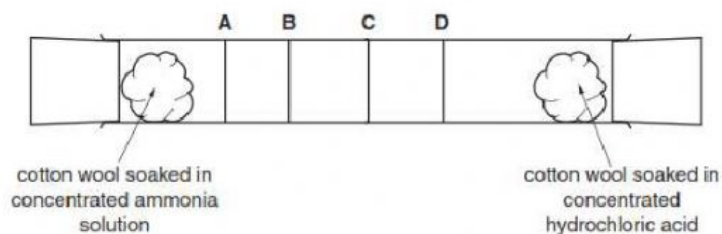


What additional apparatus is required to identify the amino acids present in a mixture?

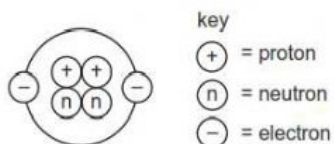
- A) a locating agent
- B) a ruler
- C) a ruler and a locating agent
- D) neither a ruler or a locating agent

2. The diagram shows the diffusion of hydrogen chloride and ammonia in a glass tube.

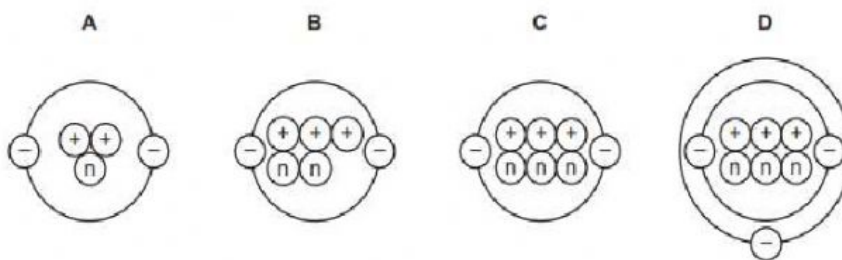
The gases are given off by the solutions at each end of the tube. When hydrogen chloride and ammonia mix they produce a white solid, ammonium chloride. Which line shows where the white solid is formed?



3. The diagram shows the structure of an atom.



Which diagram shows the structure of an isotope of this atom?



4. The table shows the structure of different atoms and ions.

| particle | proton number | nucleon number | number of protons | number of neutrons | number of electrons |
|------------------|---------------|----------------|-------------------|--------------------|---------------------|
| Mg | 12 | 24 | 12 | W | 12 |
| Mg ²⁺ | X | 24 | 12 | 12 | 10 |
| F | 9 | 19 | 9 | Y | 9 |
| F ⁻ | 9 | 19 | 9 | 10 | Z |

What are the values of W, X, Y and Z?

| | W | X | Y | Z |
|----------|----|----|----|----|
| A | 10 | 10 | 9 | 9 |
| B | 10 | 12 | 10 | 9 |
| C | 12 | 10 | 9 | 10 |
| D | 12 | 12 | 10 | 10 |

5. Iron is a metal. The structure of iron is described as a lattice of positive ions in a sea of electrons.

Which of the following statements about iron are correct?

- 1 iron conducts electricity because the electrons are free to move
- 2 iron has a high melting point due to the strong covalent bonds
- 3 iron is an alloy
- 4 iron is malleable because the layers of atoms can slide over one another

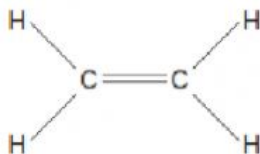
- A)** 1 only
B) 1 and 3
C) 1 and 4
D) 2, 3 and 4

6. Which two elements react together to form an ionic compound?

| element | electronic structure |
|---------|----------------------|
| R | 2,4 |
| T | 2,8 |
| X | 2,8,1 |
| Z | 2,8,7 |

- A) R and T B) T and X C) X and Z D) Z and R

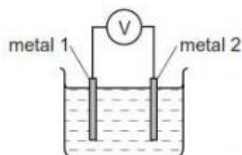
7. Ethene is an unsaturated hydrocarbon.



Which description of the bonding in ethene is correct?

- A) All atoms in the molecule have a share of eight electrons.
B) Each carbon atom shares two of its electrons with hydrogen atoms and two of its electrons with a carbon atom.
C) Each carbon atom shares two of its electrons with hydrogen atoms and one of its electrons with a carbon atom.
D) The two carbon atoms share a total of six electrons with other atoms.

8. Different metals were tested using the apparatus shown.



Which pair of metals would produce the largest voltage?

- A) copper and silver
B) magnesium and silver
C) magnesium and zinc
D) zinc and copper
9. Three electrolysis cells are set up. Each cell has inert electrodes.
The electrolytes are listed below.
cell 1 aqueous sodium chloride
cell 2 dilute sulfuric acid
cell 3 molten lead(II) bromide

In which of these cells is a gas formed at both electrodes?

- A) 1 and 2 B) 1 and 3 C) 2 only D) 3 only

10. Dinitrogen tetroxide, N_2O_4 , breaks down into nitrogen dioxide, NO_2 .



The reaction is reversible and endothermic.

Which conditions will give the largest yield of nitrogen dioxide, NO₂?

| | temperature | pressure |
|----------|-------------|----------|
| A | high | high |
| B | high | low |
| C | low | high |
| D | low | low |

11. The reactions of four different oxides W, X, Y and Z are shown.

W reacts with hydrochloric acid but not sodium hydroxide.

X reacts with both hydrochloric acid and sodium hydroxide.

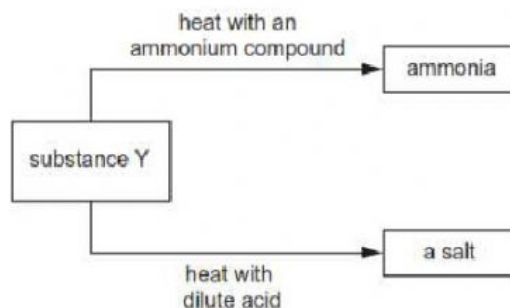
Y does not react with either hydrochloric acid or sodium hydroxide.

Z reacts with sodium hydroxide but not hydrochloric acid.

Which row shows the correct types of oxide?

| | acidic | basic | amphoteric | neutral |
|----------|--------|-------|------------|---------|
| A | W | Z | X | Y |
| B | X | Y | W | Z |
| C | Z | X | Y | W |
| D | Z | W | X | Y |

12. The diagram shows some reactions of substance Y.

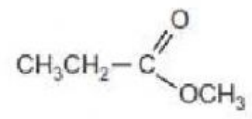


Which type of substance is Y?

- A)** an alcohol **B)** a base **C)** a catalyst **D)** a metal

13. Esters are made by reacting an alcohol with a carboxylic acid.

Which acid and alcohol react together to form the following ester?



- A) propanoic acid and ethanol
- B) propanoic acid and methanol
- C) ethanoic acid and ethanol
- D) ethanoic acid and methanol

14. Which structure represents a polymer?

