1. Decide whether each of the following is an element or a compound. (10)

O2 CO2 H2 HF Fe H2S C60 C6H12O6 CO Co

2. Look at the diagrams below and decide whether each one represents the particles in an element, a compound or a mixture. Different color atoms represent atoms of different elements. (6)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| i. | ii. | iii. | iv. | v. | vi. |

3. Write the formula for each of the following particles in the diagrams. Specify whether they are elements or compounds. (10)

O

H

H

Ar

N

N

O

O

O

C

O

HO

H

C

H

H

O

C

O

S

O

O

O

O

H

H

4. Draw the particles represented by the following formulas. (5)

HCl Fe H2S NO2 NaCl

(6)

5. Write the formula for each of the following molecules in the diagrams.

H

H

C

C

C

C

C

C

H

H

H

H

H

H

C

H

H

H

H

C

O

O

N

N

Cu

O

O

O

O

O

6. Draw the particles represented by the following formulas. (6)

C2H6 H2SO4  Zn(NO3)2