Question 1

(Answer this question online.)

Question 2

Use the following information to draw diagrams below.

- Hydrogen is an element consisting of molecules containing two hydrogen atoms.
- Nitrogen is an element consisting of molecules containing two nitrogen atoms.
- Ammonia is a compound consisting of molecules containing three hydrogen atoms bonded to one central nitrogen atom.

Hydrogen	Nitrogen	Ammonia	Mixture of Hydrogen and Nitrogen

Questions 3-5

(Answer these questions online.)

Question 6

Use your own symbols to represent examples of the following types of substances.

(a) An element

(b) A compound

(c) A mixture

Question 7

(Answer this question online.)

Question 8

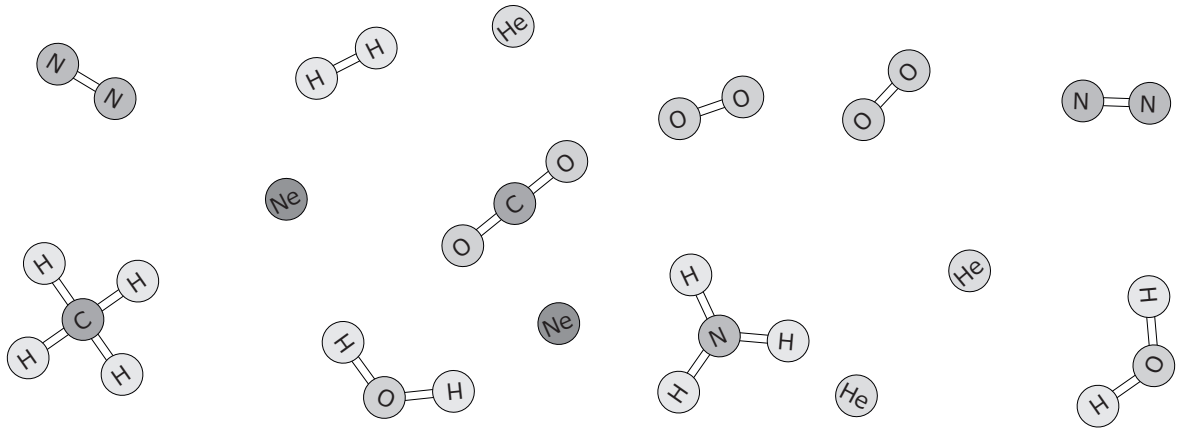
Compare the following.

(a) An atom and a molecule.

(b) An element and a compound.

(c) An atom and an element.

(d) A compound and a mixture.



Question 9

(a) Describe the key differences between a compound containing nitrogen and oxygen and a mixture containing nitrogen and oxygen.

(b) Why can the compound not be separated into the elements nitrogen and oxygen by the same physical processes that can separate the mixture into elements?

Question 10

Explain how some elements can be made up of molecules. Give three examples of such elements.

Question 11

Explain why there are many more compounds than elements.

Question 12

(Answer this question online.)

Extension Questions 1-3

(Answer these questions online.)