

1 What is the nucleon number (mass number) of a nuclide?

- A the number of neutrons
- B the number of protons
- C the number of neutrons and protons
- D the number of protons and electrons

2 A nuclide is represented by $^{35}_{17}\text{Cl}$.

How many neutrons and protons does each nucleus contain?

	neutrons	protons
A	18	35
B	18	17
C	17	35
D	17	18

3 In a sulphur nucleus there are 16 positively charged particles and 18 neutral particles.

Which are its proton and nucleon numbers?

	proton number	nucleon number
A	16	18
B	16	34
C	18	16
D	18	34

4 The most common isotope of phosphorus has the symbol $^{31}_{15}\text{P}$.

(a) How many protons and neutrons are there in one atom of this isotope?

number of protons

number of neutrons

[2]

(b) What is the difference between this isotope and the other isotopes of phosphorus?

..... [1]

(c) Complete Fig. 2.1 to show the electronic structure of $^{31}_{15}\text{P}$.

[2]

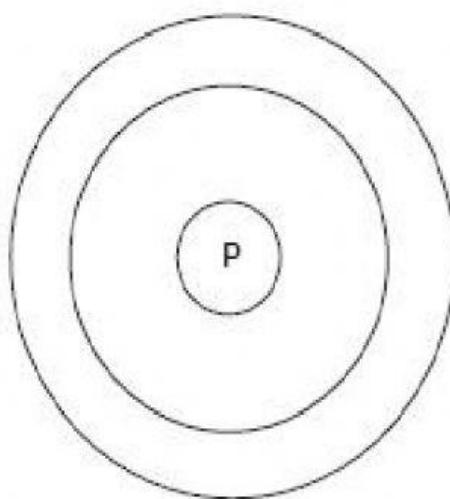


Fig. 2.1

(d) Name another element that has the same number of outer shell electrons as phosphorus.

..... [1]