

(Composition of the modern atmosphere)

Q1.(2018)

Oxygen is needed to burn fuels.

Name the source of the oxygen needed to burn fuels.

[1 mark]

Q2.a)(2019)

Titan is a moon of the planet Saturn.

Table 2 shows the percentages of some gases in the atmosphere of Titan and in the atmosphere of the Earth.

Table 2

Gas	Percentage of gas in atmosphere (%)	
	Titan	Earth
Nitrogen	98	78
Oxygen	Zero	21
Methane	1.4	0.0002
Argon	0.14	0.9
Carbon dioxide	0.0001	0.04

Which **two** gases are present in smaller percentages on the Earth than on Titan?

[1 mark]

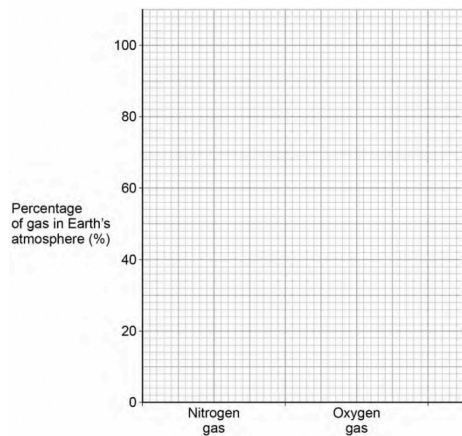
_____ and _____

Q2.b)(2019)

Complete the bar chart in **Figure 2** to show the percentages of nitrogen gas and oxygen gas in the Earth's atmosphere.

[2 marks]

Figure 2



Q2.c)(2019)

Why are algae less likely to photosynthesise on Titan than Earth?

Use **Table 2**.**[1 mark]**Tick (✓) **one** box.

Titan's atmosphere contains too little argon.

☐

Titan's atmosphere contains too little carbon dioxide.

☐

Titan's atmosphere contains too little methane.

☐

Titan's atmosphere contains too little nitrogen.

☐

Q3.(2022)

This question is about the Earth's atmosphere.

Table 5 shows:

- the estimated percentages of gases in the Earth's early atmosphere
- the percentages of gases in the Earth's atmosphere today.

Table 5

Gas	Estimated percentage (%) in the Earth's early atmosphere	Percentage (%) in the Earth's atmosphere today
Nitrogen	1.8	X
Oxygen	0.2	20.95
Carbon dioxide	96.0	0.04
Other gases	2.0	0.92

Calculate value **X** in **Table 5**.**[1 mark]**

X = _____ %

Q4.(2022)

Which **two** other gases may have been in the Earth's early atmosphere?

[2 marks]

Tick (✓) **two** boxes.

Ammonia

☐

Coal

☐

Limestone

☐

Methane

☐

Poly(ethene)

☐

Q5.(2023)

Which is the approximate percentage of oxygen in the Earth's atmosphere today?

[1 mark]

Tick (✓) **one** box.

20%

☐

50%

☐

80%

☐

100%

☐

Q6.(2023)

Water vapour is a greenhouse gas.

The percentage by mass of water vapour in the Earth's atmosphere is 0.25%.

Calculate the mass of water vapour in 350 kg of the Earth's atmosphere.

Give your answer in grams.

[3 marks]

Mass = _____ g