

(The Earth's early atmosphere and its evolution)

Q1. a). (2018)

changes

- carbon dioxide has decreased
- oxygen has increased

processes

- volcanic activity released water vapour
- the water vapour condensed to form oceans
- carbon dioxide dissolved in oceans
- carbonates produce sediments
- carbon locked up in sedimentary rocks

- algae and plants evolved / appeared
- algae / plants absorbed carbon dioxide
- by photosynthesis
- which also released oxygen

- carbon locked up in fossil fuels

Q1. b). (2018)

any **one** from:

- occurred 4.6 billion years ago

- limited or no evidence

Q2. (2019)

(Titan has) little / no oxygen

(so) photosynthesis has not
occurred (on Titan)

(therefore) little / no carbon
dioxide present (on Titan)

or

(therefore) oxygen-using
animals cannot have evolved
(on Titan)

Q3. a). (2022)

(the percentage of) nitrogen
increased

(because of intense) volcanic
activity

Q3. b). (2022)

(the percentage of) carbon
dioxide decreased

(because) carbon dioxide
dissolved in oceans

or

(because of) formation of
carbonate (precipitates /
sediments)

Q3. c). (2022)

(the percentage of) carbon
dioxide decreased

and

(the percentage of) oxygen
increased

the increase and decrease (in
percentage) occur at the same /
similar rate

Q3. d). (2022)

photosynthesis

Q4. (2022)

plankton (died)

and (the organisms) were
covered by sediments

and subjected to
high temperature

and

high pressure
(over millions of years)