

(Global warming and maintaining biodiversity)

Q1.a)(2018)

	1960–1977	1977–2003	2003–2015
trend in carbon dioxide concentration		increasing	increasing
trend in air temperature	decreasing	increasing	constant / decreasing

allow synonyms eg level / goes up / goes down

Q1.b)(2018)

traps heat / energy or (long-wavelength / IR) radiation

or

less loss of heat

or

insulates

Q1.c)(2018)

for the theory:

- (overall increased CO₂ parallels) overall increased temperature (eg by 0.4 °C)
- CO₂ traps (long-wave) radiation / IR / heat

against the theory:

- in some years (eg 1960–1977) temperature falls (while CO₂ is rising)
- many (large and small) erratic rises and falls in temperature
- overall correlation does not necessarily mean a causal link
- other (unknown) factors may be involved in temperature change

to access level 2 there must be evidence both for and against the theory **and** use of data from the graph

Q1.d)(2018)

burning of (fossil) fuels

Q1.e)(2018)

photosynthesis

Q2.(2018)

any **two** from:

- (some) plants grow faster / higher yield
- loss of habitat
- migration
 or change in distribution
- extinction

Q3.a)(2023)

(0 to 6h):

in the dark so (only) respiration occurs

(respiration) produces carbon dioxide

(8 to 12h):

in the light so photosynthesis (rate) is faster than respiration (rate)

idea of net / overall uptake of carbon dioxide

Q3.b)(2023)

field of maize only takes in carbon dioxide for 6 months of the year (compared to all year)

(and) field of maize takes in less carbon dioxide per day than rainforest