

# Oxford Revise | Geography | Answers

## Chapter 12 Why are natural ecosystems important?

All exemplar answers given are worth full marks.

1

(a)

(i) B

(ii) Tropical rainforests are found along a broad belt between the Tropics of Cancer and Capricorn, in Central and South America, Africa, South East Asia, and Australia.

(iii) The main reason for the distribution of biomes in latitudinal belts is the global circulation system and temperature changes with distance from the equator. These broad belts are explained by alternate belts of high and low pressure creating zones of low and high rainfall together with a gradual reduction in temperature with distance from the equator. For example, at low latitudes, direct solar insolation from the overhead Sun ensures powerful heating of the Earth's surface. This causes hot, humid air to rise from the surface, cool, and condense into towering clouds from which heavy convectional rain falls daily. These are ideal climatic conditions needed for the tropical rainforest biome.

(b) Coral reefs are the calcium carbonate skeletons of thousands of coral polyps with a very rich biodiversity. They are found in tropical and sub-tropical oceans and seas with a mean annual temperature of 18°C, where the clear, shallow waters allow the coral polyps to photosynthesise and feed on plankton.

(c) Photosynthesis is the process whereby plants get energy from the sun to produce carbohydrates.

(d) Plants (biotic) convert energy from the sun (abiotic) by photosynthesis into carbohydrates for growth.; Water (abiotic) is returned to the atmosphere (abiotic) via animal respiration (biotic) and evapotranspiration and transpiration from plants (biotic)

(e) the ongoing recycling of nutrients between living organisms and their environment

### Questions referring to previous content

2

(a) ICZM is a strategy that considers all social, economic, and environmental costs and benefits of a whole stretch of coast rather than each individual beach or bay.

(b) Building sea defences to stop erosion.; Strategic realignment which allows the coast to erode and moving or compensating the people affected.; Do nothing and let nature take its course.