

# Ecosystems questions



**ASSIGN  
BUSTER**

Explain what happens to the energy reaching the producers that is not converted to growth. ? (iii) Name one decomposer. (iv) State two ways in which energy is transferred from primary consumers to decomposer at C. 1 . (b) Suggest why the percentage energy transfer between producers and primary consumers at A is less than that between the primary consumers and secondary consumers at [Total 10 marks] 3. In this question, one mark is available for the quality of spelling, punctuation and grammar. The diagram below represents the energy flow through an ecosystem.

Explain how energy is transferred through food chains and food webs in an ecosystem. You should refer to the efficiency of this transfer in your answer. You will gain credit if you make use of the information in the diagram. (Allow one lined page). Quality of Written Communication [1] 4. (a) Explain the meaning of the term primary succession. The figure below shows a primary succession in a temperate climate. X represents an example of deflected succession. (b) Explain the role of pioneer plants in succession on a bare rock or sand dune. ? (c) Suggest two ways in which deflected succession at X could be caused. 0) Explain how Loams changes ruling a primary succession. [Total 9 marks] 5. The figure below shows some of the stages that have occurred during succession at Glacier Bay in Alaska. Using the information in the figure, (i) explain what is meant by the term succession ; (ii) outline two changes which occur between mid and late succession; (iii) suggest one biotic and one biotic change which are not indicated in the figure. Biotic biotic [Total 8 marks] 6.

Chalk grassland communities are found in areas of southern England such as the South Downs. Woodland rather than grassland is the climax community

for this habitat. Grazing by sheep and rabbits maintains the grassland. (1)

Define the term climax community. Suggest how grazing by sheep and rabbits could prevent a woodland climax community from developing.

Littoral 2 marks] 7. (a) Plants rely on the cycling of nitrogen to supply them with nitrogen in a form that they can absorb. Select, from the list, the most suitable word or term that matches the statements (i) to (v) below. Active transport nitrogen fixation denitrification Interrogate identifying bacterium Interactions differentiations endometriosis Rhizome nitrification (i) The conversion of nitrate ions into nitrogen gas. A bacterium that fixes nitrogen. (iii) A method by which nitrate ions pass into root hair cells.. ? (iv) The conversion of ammonium ions into nitrite ions. (b) Before the widespread use of artificial fertilizers, farmers used a variety of methods to improve the fertility of the soil and so improve the yield of their crops.

Two of the methods in common use were: Plugging-in In which legumes, such as beans, alfalfa or clover, were grown in a field and then harvested. The roots were then ploughed back into the soil rather than being dug up or burnt. Crop rotation In which different crops were grown in a field in each year for three years. In the fourth year, the fallow year, the field was not used for crops. In the following year the crop cycle was started again. Explain how plugging-in and crop rotation are able to improve the fertility of the soil.