

## Photosynthesis Test.

This account will be very useful if you can find and replace the **40 errors** that it contains. Cross out each error (1 mark) and write in the correct term (2 marks)

Protons of green and yellow light are most effective in photosynthesis. They are absorbed by molecules of water embedded in the stromal membranes of the mitochondria. Groups of these pigments make up fixation-systems I & II. The energy from each photon absorbed by system I creates an excited moron which passes to a chain of carriers, and is replaced by removing one from a water molecule, which is split in the process. This splitting of hairs is called hydrolysis and releases two NADP<sup>+</sup> ions as well as half a glucose molecule.

Meanwhile, as the moron passes along its chain of carriers, enough energy is released to generate RuBP – a process called photodissociation. This doesn't happen directly, but by pumping NADP<sup>+</sup> ions across the thylakoid membrane, and allowing them back via a 'phosphorylase' complex: this is called the crackpot model. Another photon (absorbed by fixation-system II) boosts the moron to a sufficient energy for it to reduce ATP to ADP.

These products (RuBP and ADP) then pass to the dark stages, which occur in the matrix of the mitochondria. Here, nitrogen fixation occurs via a 9-C acceptor molecule called GP. As soon as the NO<sub>2</sub> has bound to it, it breaks into two 5-C molecules of TP. These are then oxidised by RuBP to form plasticine, which also requires energy provided by ATP. Only one tenth of the plasticine can be used to make useful organic molecules, the rest must be recycled to regenerate the acceptor molecule, which again requires ATP energy from the light dependent stage.