

10 (a) Cyclic photophosphorylation and non-cyclic photophosphorylation occur during the light-dependent stage of photosynthesis.

Outline the **differences** between cyclic photophosphorylation and non-cyclic photophosphorylation.

[3]

(b) Complete the passage about the Calvin cycle using the most appropriate word or words.

A molecule of combines with a five-carbon molecule, ribulose biphosphate (RuBP), catalysed by the enzyme

This reaction produces a six-carbon compound that splits into two molecules of a three-carbon compound, glycerate 3-phosphate (GP).

ATP and are used to convert GP molecules into molecules of a three-carbon sugar, triose phosphate (TP).

Some TP molecules are used to make, while others are recycled to regenerate RuBP using ATP.

[4]

[Total: 7]