**PHOTOSYNTHESIS**

**1.** Where is chlorophyll found in a plant cell?

A. Thylakoid membranes

B. Stroma

C. Matrix

D. Cristae

(Total 1 mark)

**2.** (b) Outline the light-dependent reactions of photosynthesis.

(6)

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**3.** (a) State the location in the chloroplast of the following reactions of photosynthesis.

Light-independent reactions: .......................................................................................

Light-dependent reactions: ..........................................................................................

(2)

(b) Explain what happens to the electrons in the light-dependent reactions of photosynthesis.

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(3)

(Total 5 marks)

**4.** What is the first identifiable product of carbon dioxide fixation in photosynthesis?

A. Ribulose bisphosphate (RuBP)

B. Glycerate3-phosphate (GP)

C. Triose phosphate (TP)

D. Acetyl CoA

(Total 1 mark)

**5.** What reaction, involving glycerate 3-phosphate, is part of the light-independent reactions of photosynthesis?

A. Glycerate 3-phosphate is carboxylated using carbon dioxide.

B. Two glycerate 3-phosphates are linked together to form one hexose phosphate.

C. Glycerate 3-phosphate is reduced to triose phosphate.

D. Five glycerate 3-phosphates are converted to three ribulose 5-phosphates.

(Total 1 mark)

**6.** What happens in the light-independent reactions of photosynthesis?

A. Splitting of water molecules

B. ATP synthesis

C. Reduction of NADP

D. Reduction of CO2

(Total 1 mark)

**7.** (b) Explain how triose phosphate is produced and used in the chloroplasts of a plant.

(5)

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**8.** Where are complex carbohydrates made in the chloroplast?

A. In the intermembrane space

B. In the stroma

C. On the inner membrane

D. In the thylakoid space

(Total 1 mark)