**1.** A

[1]

**2.**

(b) chlorophyll in photosystem II absorbs light;
absorbing light/photoactivation produces an excited/high energy/
free electron;
electron passed along a series of carriers;
absorption of light in photosystem II provides electrons for photosystem I;
photolysis of water produces H+ / O2;

 generates ATP by H+ pumped across thylakoid membrane / by
chemiosmosis / through ATP synthase;

 reduction of NADP+ / generates NADPH + H+; 6 max

**3.** (a) *light-independent reactions:* stroma;
*light-dependent reactions:* thylakoid / grana; 2

(b) absorb photons of light / photoactivation;
raised to a higher energetic level;
pass from molecule to molecule;

 Plastoquinine/Plastocyanin

 3 max

[5]

**4.** B

[1]

**5.** C

[1]

**6.** D

[1]

**7.**

(b) RuBP and carbon dioxide react together;
(this is) carbon fixation;
catalysed by Rubisco;
GP produced;
GP reduced/converted to triose phosphate/TP;
using NADPH/(NADPH+H+) and ATP;
from the light-dependent reactions;
some triose phosphate used to regenerate RuBP;
some triose phosphate used to synthesize glucose/starch; 5 max

**8.** B

[1]