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Question	Expected Answers	Marks
2 (a)	<p>1 rate of respiration can equal rate of photosynthesis / CO_2 used = CO_2 produced / O_2 used = O_2 produced ;</p> <p>2 ref to compensation point ;</p> <p>3 mitochondria use oxygen ;</p> <p>4 chloroplasts produce oxygen ;</p> <p>5 mitochondria are always active / respiration continues independently of light ;</p> <p>6 chloroplasts are inactive in dark / photosynthesis does not take place without light ;</p> <p>7 oxygen released by, chloroplasts / photosynthesis, can be utilised by mitochondria / respiration ;</p> <p>8 at high light intensities, chloroplasts produce more oxygen than the mitochondria consume ;</p> <p>9 AVP ; e.g. valid refs to CO_2 exchange</p>	max 4
(b)	<p>phosphate ions are used to produce ATP ; in oxidative phosphorylation / Krebs cycle / chemiosmosis / electron transport / ATP synth(et)ase ; ATP leaves mitochondria ;</p>	max 2
(c)	<p>carrier protein / transport protein / transmembrane protein involved ; A ref to a specific channel concentration of triose phosphate is higher in the chloroplast (than in the cytoplasm) ; because it is a product of, photosynthesis / light independent reaction / Calvin cycle ; triose phosphate moves, down concentration gradient / from high to low concentration ; ATP not involved / no energy used ;</p>	max 2
(d)	<p><i>ignore references to chloroplasts or mitochondria being cells, having cytoplasm and reference to free ribosomes</i></p> <p>free / naked, DNA ; A DNA not surrounded by, membrane / envelope have an inner folded membrane / AW ; ribosomes, smaller than those in cytosol / similar in size to prokaryotic ribosomes ; A ref to 70S and 80S circular DNA ; A loop AVP ; e.g. absence of introns</p> <p>R absence of a nucleus from the chloroplast or mitochondrion R ref to membranous organelles as chloroplasts and mitochondria are these organelles</p>	max 2

[Total: 10]