

Question number	Answer	Notes	Marks
7 (a)	idea that source will not run out / can be replaced;	ignore 'recycled' or 're-used' condone 'infinite'	1
(b)	any four from: MP1. water has (high) {gravitational potential energy/GPE (store)} ;	accept 'replenished' condone 'turns into', 'becomes' etc for 'transfers' energy starts as gravitational (potential energy)	4
	MP2. water loses GPE / gains {kinetic energy/KE};	transfers from GPE to KE scores MP1 and MP2	
	MP3. transfers mechanically (to water or to turbine or to generator);	allow at any correct stage i.e. for water, turbine or generator allow KE of water to KE of turbine allow KE of turbine to KE of generator	
	MP4. energy is transferred electrically (from power station);	transfers from KE (of water or generator) to electrical (energy)	
	MP5. energy is wasted by heating/radiation e.g. IR, sound;	allow transfer of heat (energy) to surroundings/eq allow transfer of sound (energy)	
(c) (i)	any one from: <ul style="list-style-type: none"> idea that energy can be supplied more reliably by HEP; idea that HEP produces less (environmental) noise; idea that HEP can respond (quickly) to demand; 	ignore cost factors ignore visual pollution e.g. allow does not depend on the weather	1
(ii)	any one from: <ul style="list-style-type: none"> large area of land needs to be flooded; location dependent / mountainous area; damage to habitats / eq; 	ignore cost factors ignore visual pollution	1

(iii)	any THREE from: MP1 idea that wind farm cannot store energy; MP2 idea of wind powering the pump when (energy) demand is low;	do not credit simple reference to wind farm powering pump (repeats question)	3
	MP3 idea that (therefore) upper lake acts as an energy store (for wind farm output); MP4 (so that) energy released from upper lake or to the HEP when demand is high MP5 idea that more electricity/energy is transferred usefully;	allow idea that upper lake acts like a battery (so that) energy can be released from the upper lake when it's not windy condone less energy or less electricity wasted condone less energy or less electricity lost	

Total for Question 7 = 10 marks