

Question number	Answer	Notes	Marks
13 (a)	any two from: same starting temperature; same volume of water; same time interval;		2
b i	B; because dark surfaces are good emitters;		2
ii	C; it has the greatest surface area (exposed to the air);	allow widest opening/eq	2
c	MP1. It loses the least amount of (thermal) energy; MP2. cotton wool reduces conduction;  MP3. the white/light surface (of the cotton wool) is a poor emitter (of radiation);  MP4. the lid reduces convection;	MP2, 3, 4 must include a method of thermal energy transfer   allow lid reduces evaporation for MP4  allow cotton wool is an insulator for MP2	4

**Total 10 marks**