Heating and cooling puzzles

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A rough guide as to how the marks are given is as follows:

		Effort Grade		**Achievement of task**
A	Excellent	this effort grade will rarely be given – to get this mark the work must demonstrate great effort and real clarity	+	Excellent understanding of the work
B	Good	will be given e.g. when a lot of effort has obviously been put into the work or when the work is very clearly set out	=	Good understanding of the work
C	Average	will be given for work which is of a satisfactory, acceptable standard; if you get less than C you must improve the standard at once!	−	Poor understanding of the work
D	Poor			
E	Very Poor			

Use your knowledge of heat transfer to explain the following. A few sentences of explanation if what I'm looking for here. A diagram may help (remember, a picture is worth a thousand words).

a. Will a snowman melt with a coat on melt slower, faster than one without, or will it make no difference? Why do you think this? Will any other factors (coat colour, temperature outside) make a difference?

b. Shouldn't all objects at the same temperature feel like they *are* at the same temperature? You aren't reluctant to put your clothes on when they are at a room temperature of 21 °C, but how about sitting down naked in a dry bathtub at the same temperature? What's the difference?

c. Why does the top of a pond freeze before the middle and bottom? (There's more than one reason.) If this weren't so, there would be virtually no fresh water fish outside the tropics.