

PHYS2060
Guide to past midsession papers
2009

2002 Midsession test

Question 2 would make an appropriate 2009 Midsession question.

You can do most of Question 1, however, we have not yet covered the van der Waals gas equation in lectures and we have not discussed phase transitions as yet.

2006 Midsession test

You should be able to answer most of Question 1. The only part we have not covered is (e) the equipartition theorem.

You should be able to answer Question 2, although you would need to memorise “Boyle’s Law”, “Charles’ Law” etc. I am not likely to ask you to memorise these laws, but the question is fine.

Question 3 parts (a) to (c) are fine. I note that Adam used the “+” sign convention in stating the First Law (i.e. work done on the system), whereas we are using the “-“ sign convention (work done by the system). We have not covered parts (d) and (e) as yet.

2007 Midsession test

Question 1: part (a) is hard – see the solution. You should easily do the rest of the question.

You should be able to answer Question 2.

Question 3 is on the Maxwell velocity distribution, which we have not yet covered.

2008 Midsession test

Question 1 is nice and not as hard as you may think. You should be able to give a complete description of the two bubbles (P, V, T, U etc). I would have asked for this!

Question 2 is on the Maxwell velocity distribution, which we have not yet covered.

Question 3 is fine. The only issue is that Adam used the opposite sign convention for W as per the note above under 2006.