In general, exam performance was good – the average exam mark was 37.44/60, i.e. 62%. Blackboard Item Analysis (see Figure 1) shows that the exam had 12 easy questions and 15 medium questions. We will consider adding some harder (more discriminating) questions for next year.

Item analysis recommends review of a number of questions (largely MCQs). We will follow this recommendation.

In general, performance on the MCQ and True/False questions was better than on the essay questions. Detailed performance feedback for essay questions is given below.

**Q20** Answers to this question were reasonable, with most responses identifying that the issue relates to different kinds of partonomic relationships. Solutions were not always well expressed, however, with some answers referring to the introduction of direct partonomic relationships, which does not directly solve this issue.

**Q21** Most answers identified SEP triples as a potential solution here, although many did not clearly or adequately describe a worked example.

**Q22** Many people did well on this one, but lost a mark for lack of precision—size is a PIMPS property, but more precisely is a quality. Others made up words to substitute for the PIMPS words—some credit was given where possible. Most people spotted the processes, but tea-pot and tea-leaves were variously mis-assigned—they are material objects.

**Q23** This question was answered poorly overall. Few answers referred explicitly to an appropriate design pattern (SEP triples are about obtaining “transitivity” in a language that does not support it explicitly, rather than handling the non-transitivity of skos:broader).

**Q24** Reasonable answers, although not many described an actual application – answers tended to be rather vague.

**Q25** Many people put the correct closure axiom into their answer, but then spoilt it by also putting a closure axiom in for the other relationship; this can easily be avoided by reading the question carefully. There were also some example of people using a conjunction of the filler classes instead of a disjunction – and instead of or.
Q27 Most people did well on question 26 on ‘untangling’ the labels and spotting the dimensions and that the ontology was about ‘vehicles’. This was not transferred over to question 27, which asked for the axioms for the ‘primary root class’, that is, the ‘vehicle’. Many answers attempted to write the whole ontology or all the root classes; again, this is largely a matter of reading the question and doing what it asks, rather than providing too much.

In a number of essay responses, students provided irrelevant materials that seemed to be an attempt to demonstrate knowledge of “something”. It is important to read the questions carefully in order to determine what is being asked for.
Figure 1: Blackboard Item Analysis