Comments:

DRL:
Q1 Usually well done. Some problems with confusion between the specification of LowLink and its implementation.
Q2 No one got the correct answer because there is a wrinkle in the data: no pivot point can be negative. A point I failed to highlight in the lecture.
Q3 In general very well done.

IEP: Performance was down on last year. Anecdotal evidence suggests that candidates concentrated on the material of the first lectures, which was not tested in the examination, and were disappointed when only the later topics were examined.

Q4:
Performance on this question was disappointing, with a large number of non-serious attempts. An all-too-common pattern was: a confused answer to Part a; a description of the wrong algorithm for Part b; and blank for the rest, resulting in 3/20.

a) Most candidates understood the deterministic/non-deterministic distinction. However, many candidates thought that Space(f) was the space required to compute the function f.

B) Candidates giving the basic ‘half-the-search-length-each-time’ algorithm got 4/4; those giving the wrong algorithm got 2/2.

C) Almost all candidates attempting this had the right idea and got 5/5

d) Candidates got full marks if they pointed out that a logarithm, of an exponential is a polynomial function, since they obviously then had the right idea. Candidates making some sort of coherent statements got 2 or 3. Many candidates left this blank.

E) Most candidates simply threw away these (almost free) marks. They merely had to state that the class of polynomial functions is closed under squaring, but that log^2 is not proportional to log.

Q5:
This question was quite well done.

A) Most candidates were fine on this.
b) Most candidates were fine on this.
C) Most candidates had the right idea. However, almost no one realized that the TSP is not, as stated, a decision problem, and therefore needs to be turned into one (TSP-feasibility) before it can be said to be in NP.
D) A reasonable number of candidates remembered the basic idea of setting the distances between connected vertices to be 1, and then testing TSP-feasibility with an overall length bound of n. You have to set the distances between nodes not joined by an edge to be 2; but I was “very” generous in marking this part.

Q6:
The first five parts of this question were largely bookwork, relating to a single chapter of the prescribed course text. Of the small number of candidates who attempted it, it is obvious that most had either not read the textbook at all, or, if they had, had not understood anything. The final two parts of the question, which involved problem-solving, should have been relatively straightforward adaptations of material shown in lectures. Most students did not even attempt these, though there were one or two pretty reasonable solutions. All in all, this question was badly done. There are clearly two cultural problems here that needs to be addressed:
(i) students must be made to understand that instructions to read textbook chapters are not issued frivolously and are to be taken seriously;
(ii) students need to be introduced to the notion that they should have to solve problems in examinations.