A-1 Explain the connection between threshold encryption and robustness in the context of electronic voting.

Grading: 1.0
Motivation:
A well-put answer. It agrees with the information on page 3 and 12 in the lecture notes about electronic voting.

A-3 Why is it natural to think of the communication channel as a bulletin board?

Grading: 1.0
Motivation:
Very good answer. Agrees for example with the information on page 22 in the lecture slides.

A-5 How do homomorphic and fully homomorphic encryption systems differ?

Grading: 1.0
Motivation:
Once again a very good answer. Similar information can be gathered from this page: https://en.wikipedia.org/wiki/Homomorphic_encryption

A-7 Give two isomorphic graphs of at least ten nodes each. (Do not just tweak the example from the slides; construct the example from scratch.) Give the isomorphism. Explain how these graphs (or at least larger graphs) can be used in a zero-knowledge proof. You do not have do give an explicit example of the zero-knowledge proof.

Grading: 0.7
Motivation:
The graphs are correct according to the lecture slides (p. 11-15). There is however no explanation how the graphs can be used in a zero-knowledge proof.

A-9 Explain how the zero-knowledge property of a zero-knowledge proof is related to a simulator.

Grading: 1.0
Motivation:
The answer is correct and agrees with the information on page 6 in the lecture notes about electronic voting.

A-12 Perform Lagrange interpolation to find f(0) when f(1) = 0, f(2) = -2, f(3) = 4 and f(4) = 10. The degree of the polynomial f(x) is 3.

Grading: 1.0
Motivation:
The answer is correct. I got the same result from following this guide for example: http://mathworld.wolfram.com/LagrangeInterpolatingPolynomial.html

A-16 In the slides, two main strategies for making an electronic voting scheme are presented. One is that "the vote is posted on the bulletin board in clear text, but the person casting the vote is anonymous". Describe a scheme like this, and in particular explain why this scheme still ensures "one-voter-one-vote".

Grading: 1.0
Motivation:
Good answer! Mixes can indeed be used. Chapter 4.1 in the lecture notes about electronic votes provide similar information.¨

A-17 In the Mix network voting scheme, if there is an error in a voter's vote, all other votes are disclosed. Explain how this happens. Give an example of a voting scheme which avoids this and explain how.

Grading: 1.0
Motivation:
Correct once again. The same information is provided in chapter 4.1 and 4.2 in the lecture notes about electronic voting.

Total score: 7.7