Total: 27 points.

0. 1 point for the cover page.

1. 9 points total, 1 point per question.

2. 8 points total. For each of the four questions:
   - 1 point per correct answer (YES)
   - 1 point for a correct example

3. 5 points

4. 4 points.

   For questions 3 and 4, your proof has to be correct, and well written. You will get few points, if any, if you do not write any words, if you do not explain what you are doing, if your logic is wrong, if you assume what you are trying to prove, if you misuse symbols or variables, ...

   If your write-up is a mess, and the grader cannot understand what you did, you will get 0 points. We are not mind readers.