

Note: You **must** show all your work. Numerical answers without a proper explanation or a clearly written down path to the solution will be assigned zero points.

Please, provide your complete solution to the following problems:

Problem 4.1. (5 points) Solve Problem **3.2.2** from the textbook.

Problem 4.2. (5 points) Solve Problem **3.2.4** from the textbook.

Problem 4.3. (5 points) Solve Problem **3.3.2** from the textbook.

Problem 4.4. (5 points) Solve Problem **3.3.6** from the textbook.

Problem 4.5. (5 points) Solve Problem **3.3.10(c)** from the textbook. *You are allowed to use the claims from parts (a) and (b) without proof.*

Problem 4.6. (5 points) Solve Problem **3.4.2** from the textbook.

Problem 4.7. (5 points) Solve Problem **3.4.6** from the textbook.

Problem 4.8. (5 points) Solve Problem **3.5.4** from the textbook.

Problem 4.9. (5 points) Solve Problem **3.6.2** from the textbook.

Problem 4.10. (5 points) Solve Problem **3.7.2** from the textbook.