1. (Lecture 8)
   (a) Prove that all Cauchy sequences are bounded (Lemma 10.10)
   (b) State and prove the Cauchy criterion (Theorem 10.11 and Lemma 10.9)

2. (Lecture 14)
   (a) State and prove the Maximum-value Theorem (Theorem 18.1)

3. (Lecture 15)
   (a) Give the definition of a function continuous on a set
   (b) Give the definition of a function uniformly continuous on a set
   (c) State the Bolzano-Weierstrass Theorem (Theorem 11.5, Lecture 9)
   (d) State and prove the Cantor-Heine Theorem (Theorem 19.2)

4. (Lecture 22)
   (a) Give the definition of the Taylor polynomial
   (b) State and prove the Taylor’s theorem (Theorem 31.16)