MATERIAL TO STUDY FOR MATH 785

I have tried to list below the main topics covered in the course. If a topic is not to be included as part of the comprehensive exam, I have written "omit" next to the topic. If I expect you to know the proof(s) associated with a given topic, I have indicated so next to the topic.

(1) Theorem 6: π is irrational (know proof)
(2) Theorem 8: $\log 2$ is irrational (know proof)
(3) Theorem 9: $\zeta(3)$ is irrational (omit)
(4) Liouville numbers
(5) Theorem 15: e is transcendental (know proof)
(6) Lindemann's Theorem (Theorem 17)
(7) Theorems 18 through 21
(8) The application of Theorem 21 (omit)
(9) The applications of Theorem 22
(10) Theorem 23: Weyl's Theorem (know proof assuming Lemmas)
(11) Lemma 3 for Weyl's Theorem (know proof)
(12) Cesàro sums
(13) Fourier Series
(14) Examples of Weyl's Theorem