

SX-5216

ANDHRA UNIVERSITY
DEPARTMENT OF MATHEMATICS
M.A/M.SC MATHEMATICS
II-SEMESTER

2005-2006 AB

M 202 REAL ANALYSIS-II

UNIT I

Lebesgue measure: Introduction, Outer measure, measurable sets and Lebesgue measure, A non measurable set, measurable functions, Little woods three principles.

Chapter 3 of the text book

UNIT II

The Lebesgue Integral: The Riemann integral, The Lebesgue integral of a bounded function over a set of finite measure, the integral of a nonnegative function, the general Lebesgue integral, convergences in measure.

Chapter 4 of the textbook

UNIT III

Differentiation and integration: Differentiation of monotone functions, Functions of bounded variation and differentiation of an integral, Absolute continuity, and convex functions.

Chapter 5 of the textbook

UNIT IV

The classical Banach spaces: The L^p -spaces, The Holder's and Minkowski's inequality, convergences and completeness, approximations in L^p spaces, Linear functionals on L^p spaces.

Chapter 6 of the textbook

Textbook: Real analysis by H. L. Royden, Macmillan publishing co.inc. 3rd edition, New York, 1988.