

**EC II - ANALYTIC NUMBER THEORY**

**UNIT I**

The fundamental theorem of arithmetic (Chapter 1) – Arithmetic function and Dirichlet multiplication

**UNIT II**

Averages of Arithmetic functions

**UNIT III**

Some elementary theorems on the distributions of prime numbers.

**UNIT IV**

Congruences

**UNIT V**

Quadratic residues and the quadratic reciprocity law

**TEXT BOOK(S)**

[1] Tom M. Apostol- Introduction to Analytic Number Theory, Narosa, New Delhi.

UNIT I	Chapter 2
UNIT II	Chapter 3
UNIT III	Chapter 4
UNIT IV	Chapter 5
UNIT V	Chapter 9 - Sections 9.1 to 9.9

**REFERENCE(S)**

[1] J.P. Serre, A course in Arithmetic, GTM, Vol. 7, Springer-Verlag, 1973.