

TABLE OF CONTENTS

<u>CHAPTER I : COMPLEX ELLIPTIC CURVES</u>	1
1. Weierstrass theory	2
2. Theta functions (Jacobi)	19
3. Variation of the elliptic curve and modular forms	35
4. Arithmetical properties of some modular forms	66
<u>CHAPTER II : ELLIPTIC CURVES IN CHARACTERISTIC ZERO</u>	75
1. Algebraic varieties and curves	77
2. Plane cubic curves	98
3. Differential forms and elliptic integrals	124
4. Analytic p -adic functions	144
5. Tate's p -adic elliptic curves	160
<u>CHAPTER III : DIVISION POINTS</u>	173
1. Division points in characteristic zero	174
2. ℓ -adic representations	184
3. Integrality of singular invariants	197
4. Division points in characteristic p	215
<u>CHAPTER IV : COMPLEMENTS</u>	225
1. Hasse's invariant	226
2. Zeta function of an elliptic curve over a finite field	240
3. Reduction mod p of rational elliptic curves	246
REFERENCES	254
INDEX	262