Contents

| 1. | Introduction | 1 |
|-------------|--|----|
| 2. | Automorphic functions on the upper half plane, especially modula | ìr |
| | functions | 2 |
| 3. | Elliptic curves and the fundamental theorems of the classical | |
| | theory of complex multiplication | 8 |
| 4. | Relation between the points of finite order on an elliptic curve | |
| | and the modular functions of higher level | 13 |
| 5. | Abelian varieties and Siegel modular functions | 16 |
| 6. | The endomorphism ring of an abelian variety; the field of moduli | |
| | of an abelian variety with many complex multiplications | 26 |
| 7. | The class-field-theoretical characterization of K' (φ (z)). | 33 |
| 8. | A further method of constructing class fields | 39 |
| 9. | The Hasse zeta function of an algebraic curve | 48 |
| L O. | Infinite Galois extensions with \(\mathbb{l} - \text{adic representations} \) | 55 |
| 11. | Further generalization and concluding remarks | 62 |
| 2. | Bibliography | 65 |