

Contents

Part I

1 Introduction	1
2 Remarks on general coverings	4
3 Resumé of the Riemann vanishing theorem	7
4 Ramified normal coverings	8
5 Abelian covers	12
6 Main results	19

Part II

1 Introduction	32
2 Completely ramified abelian covers	40
3 Two-sheeted covers	50
4 Other applications	56
5 Closing remarks	63

Part III

1 Introduction	66
2 Castelnuovo's method and p_0 -hyperellipticity	70
3 Extensions	74
4 The $p - 2$ conjecture for $p = 5$	79
5 Elliptic-hyperelliptic surfaces of genus five	81
6 Elliptic-hyperelliptic surfaces of genus three	88
7 Cyclic groups of order three for genus two	94
8 Some local characterizations	95
9 Closing remarks	98

References

100

Index

102