

CONTENTS

Chapter 1	The Zariski topology, the Jacobian criterion and examples of simple algebras over a field k	1
Chapter 2	The Kähler 1-differentials	18
Chapter 3	Every k -algebra A which is essentially of finite type over k and simple is a regular local ring	35
Chapter 4	Brief discussion of unramified and étale homomorphisms	45
Chapter 5	Some corollaries to Theorem 3.5	54
Chapter 6	Fitting ideals	57
Chapter 7	Proof of the Jacobian criterion and some characterizations of simple k -algebras and A -algebras	73
Chapter 8	Characterization of simple A -algebras in terms of étale homomorphisms; invariance of the property of being a simple algebra under composition and change of base	89
Chapter 9	Descent of simple homomorphisms and removal of all noetherian assumptions in Chapter 7 and Chapter 8	103
Chapter 10	Simple morphisms of preschemes and translation of previous theorems into the language of preschemes	117
APPENDIX		128
BIBLIOGRAPHY		145
INDEX TO TERMINOLOGY		146
INDEX TO SYMBOLS		146