

CONTENTS

PREFACE	v
ACKNOWLEDGMENTS	vii
CHAPTER I. Generalities	1
I.1. Localization	1
I.2. The Picard Group of a Commutative Ring	7
I.3. The Brauer Group of a Commutative Ring	12
CHAPTER II. The Relative Picard Group	21
CHAPTER III. The Relative Brauer Group	37
III.1. κ -Progenerators and Morita Theory	37
III.2. Separability	45
III.3. The Relative Brauer Group	49
III.4. Some Exact Sequences	66
CHAPTER IV. Application to Sheaves, Ringed Spaces and Schemes	69
IV.1. Brauer Groups of Ringed Spaces	69
IV.2. Picard and Brauer Groups of Quasi-Affine Schemes	74
IV.3. Extending Coherent and Quasicoherent Sheaves	82
IV.4. A Note on Some Results of G. Horrocks	94
CHAPTER V. Applications to Integrally Closed Domains, Reflexive Modules etc.	97
V.1. Relative Seminormalization	97
V.2. Noetherian Integrally Closed Domains	105

CHAPTER VI.	Invariants of Graded Rings	115
VI.1.	Background on Graded Rings and Modules	115
VI.2.	Graded Picard Groups	125
VI.3.	Graded Azumaya Algebras and Graded Brauer Groups	132
VI.4.	Mayer-Vietoris Sequences for Graded Brauer Groups	151
VI.5.	Graded Brauer Groups of Certain Graded Rings	166
VI.6.	Cohomological Interpretation	186
	Appendix	197
CHAPTER VII.	Applications in Algebraic Geometry	207
VII.1.	The Brauer Group of a Projective Variety	207
VII.2.	Brauer Groups of Projective Curves	217
CHAPTER VIII.	Exercises	227
REFERENCES		241
INDEX		249