

Contents

Preface

vii

SECTION 1

INTRODUCTION TO GENETICS

1. Practical Application of Genetics in Nursing Practice 3
2. Cellular Division, Characteristics and Structure of Genes 32
3. Mendel's Laws, Sex Determination and
Patterns of Inheritance 49
4. Mutations and their Effects 62

SECTION 2

MATERNAL INFLUENCE ON DEVELOPMENT AND PRENATAL DIAGNOSIS

5. Prenatal Factors Affecting Growth and Development 73
6. Infertility and Abortions 91
7. Prenatal Conditions: Chromosomal and
Neurological Defects 103
8. Prenatal Tests and Diagnosis 113

SECTION 3

GENETIC TESTS IN NEONATES

9. Karyotype Analysis, FISH and
Polymerase Chain Reaction 123
10. Congenital Abnormalities, Developmental Delays
and Dysmorphism 131

SECTION 4**GENETIC CONDITIONS IN ADULTS**

11. Cancer Genetics	145
12. Inborn Errors of Metabolism	160
13. Hematological Disorders	170
14. Sex-Linked Disorders	184
15. Mental Disorders	193

SECTION 5**SERVICES RELATED TO GENETICS**

16. Human Genome Project	209
17. Gene Therapy	214
18. Eugenics and Genetics Counseling	222
19. Legal and Ethical Issues in Genetics Nursing	232
20. Role of a Nurse in Genetics	238
<i>Genetics</i>	241
<i>Multiple Choice Question Bank</i>	243
<i>Index</i>	251