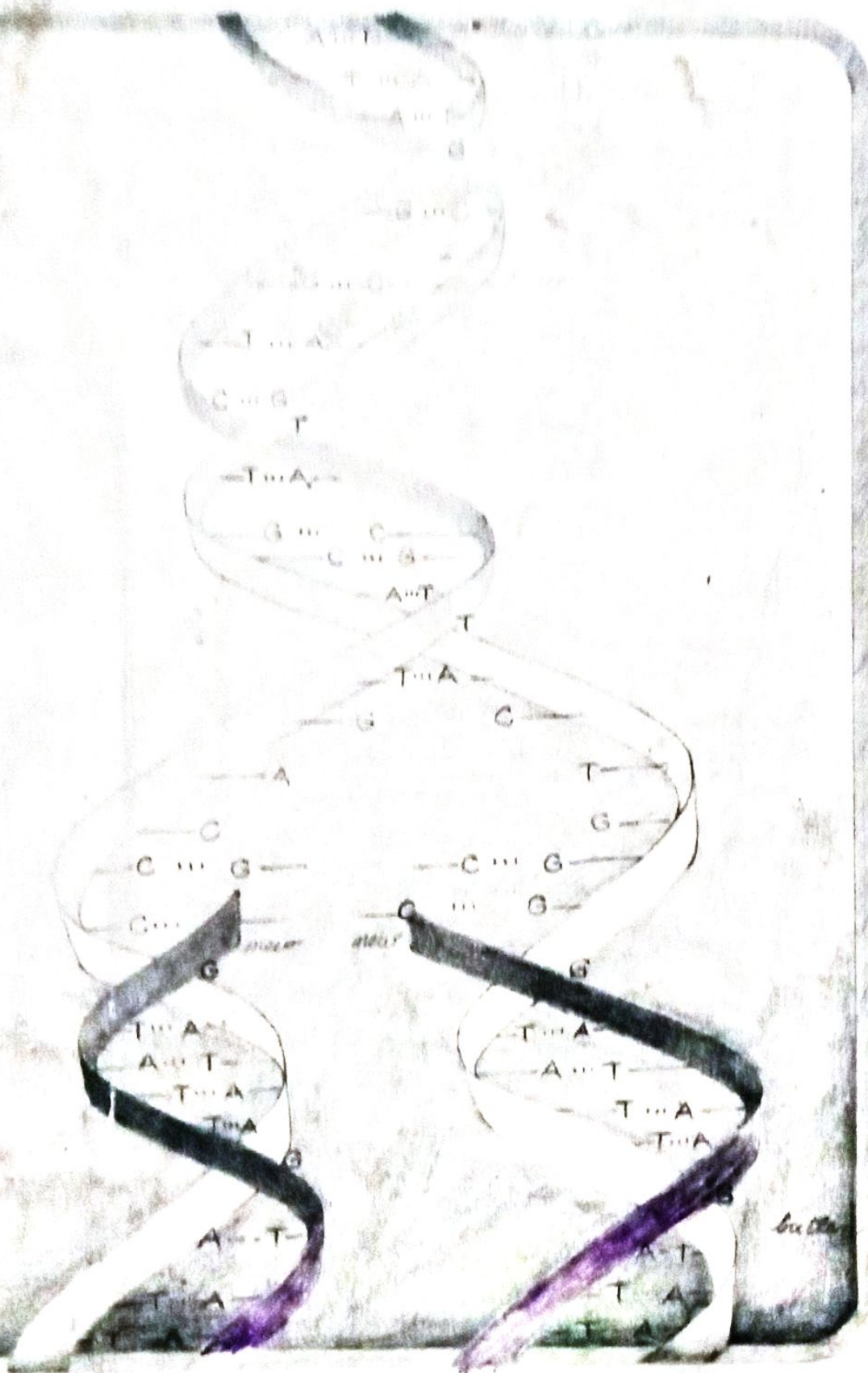


Genetics: Questions and Problems



Contents

Preface

1	Mitosis and Meiosis	1
2	Life (Chromosome) Cycles of Eukaryotes	16
3	Monohybrid Inheritance	26
	<i>The First Law of Genetics: Mendel's Law of Segregation</i>	
4	Dihybrid and Multihybrid Inheritance	40
	<i>Second Law of Inheritance: The Law of Independent Assortment</i>	
5	Probability	54
6	Gene Interaction	62
7	Lethal Genes	80
8	Multiple Alleles	90
9	Polygenic Inheritance	112
10	Sex Determination and Sex Differentiation	124
11	Sex Linkage	148
12	Sex-influenced and Sex-limited Inheritance	170
13	Linkage and Crossing-over	186
14	Chromosome Mapping	218
15	Extranuclear Inheritance and Related Phenomena	234
16	Recombination in Bacteria	260
17	Recombination in Viruses	292
18	Genotype, Environment, and Phenotype	312
19	Pleiotropism, Penetrance, Expressivity, and Phenocopies	322
20	Euploidy: Haploidy and Polyploidy	332
21	Aneuploidy	354
22	Chromosome Aberrations	376
23	Balanced Lethal Systems and <i>Oenothera</i> Cytogenetics	408
24	Gene Mutation	414
25	Chemical Nature and Structure of Genes and Chromosomes	446
26	The Gene: Genetics of Gross and Fine Structure and Interallelic Complementation	480
27	Biochemical Genetics	516
28	Protein Synthesis	550
	<i>Transcription and Translation</i>	
29	Coding, Collinearity, and Suppressors	596

- 30 Development and Regulation
- 31 Inbreeding, Outbreeding, and Heterosis
- 32 Population Genetics
- 33 The Genetics of Race and Species Formation

Appendix

- Table A-1 Product-moment formulas and their associated recombination fractions
- Table A-2 Structure of DNA bases, base analogs, and tautomerism
- Table A-3 Building Blocks of DNA
- Table A-4 Structure and abbreviations of amino acids
- Table A-5 Coding dictionary
- Table A-6 Metric equivalents
- Table A-7 Biochemical abbreviations
- Table A-8 Chi square

Index