Contents

Certificate		i
Declaration		ii
Ackno	Acknowledgement	
Chapt	1-26	
1.1	Area of the Study	4
1.2	Need for Intellectual Property Rights	9
1.3	Flaws in the IPR-Incentive link	11
1.4	Meaning of Patent	13
1.5	Origin of Intellectual Property Rights	15
1.6	Scope of the Study	19
1.7	Objective of the Study	20
1.8	Hypothesis of the Study	21
1.9	Research Methodology	22
1.10 Scheme of the Study		23
1.11	Utility of the Study	26
Chapt	er 2. Biodiversity – Its Genesis and Conservation	27-53
2.1	Types of Biodiversity	29
2.2	Importance of Biodiversity	31
2.3	Benefits of Biodiversity	33
2.4	Threats to Biodiversity	38
2.5	Circle of Death	41
2.6	Man-made mega death	46
2.7	Conservation of Biodiversity	52

Chapte	er 3. Intellectual Property Rights & Biodiversity –	54-81
	An Interface	
3.1	History of Intellectual Property Rights & Biodiversity	54
3.2	Raison D'etre of IPR	57
3.3	Interface between IPRs and Biodiversity	61
3.4	Patenting plants	63
3.5	Impacts of IPRs on Biodiversity	65
3.6	Contribution of the Third World	72
3.7	Ripping off of the Third World	75
Chapte	er 4. Traditional Knowledge and IPRs	82-140
4.1	Seed Piracy	83
4.2	The 'sui generis' System	88
4.3	Implications of plant patents	89
4.4	Recovery of the Commons – an Indian perspective	92
4.5	Bio-piracy and bio-prospecting	96
4.6	Patenting Traditional Indian Knowledge	98
4.7	First victory over bio-piracy	99
4.8	Bitter-sweet victory (Neem)	101
4.9	Yoga patents	103
4.10	The Basmati victory (Rice)	104
4.11	The Battle continues (Wheat)	108
4.12	Protection or Piracy	114
4.13	Legal and Political aspects of bio-piracy	118
4.14	Ethical issues: Bio-piracy & Bio-prospecting	119
4.15	Stopping biopiracy	123
4.16	Implications of TRIPs for the Seed Sector	126
4.17	TRIPs Review – 1999	128
4.18	Traditional Knowledge & its protection	133

4.19	Indian Traditional Knowledge	135
4.20	Problems in protecting Traditional Knowledge	137
Chapt	er 5. Genetically Modified (GM) Crops –	141-174
	A legal perspective	
5.1	Genetically Modified crops	145
5.2	Impacts of Genetic Modification	147
5.3	The case of Starlink	158
5.4	The risk of Monsanto's Toxic plants	160
5.5	The Protein-Potato Hoax	164
5.6	Horizontal Gene Transfer	167
5.7	Terminator Gene – A New Threat	167
5.8	Liability for Genetic Modification	168
5.9	GM Plants and Patents	170
5.10	Policy on GM Crops	172
Chapter 6. Patents on Life-forms – Legal Implications		175-220
6.1	Genetic Modification – Playing God	176
6.2	Commodifying Life	182
6.3	Human Genetic Engineering	184
6.4	The John-Moore case	188
6.5	The Human Genome Diversity (HGD) Project	190
6.6	Implications of HGD	192
6.7	Protection of the Indigenous Communities	195
6.8	Life as property	196
6.9	Enclosure of the Commons	197
6.10	Patenting Life	198
6.11	Equity problems related to patents on life	200
6.12	Patentability from Ewe to Eve	202

6.13 Devaluing Life	204
6.14 Human Genome and IPR	208
6.15 Human Genome Project	210
6.16 Universal Declaration on the Human Genome and Human	213
Rights, 1997	
6.17 The Human Genome and The Patent Boom Challenge	214
6.18 Patentability of the Human Genome	218
Chapter 7. Statutory provisions on IPR: 2	21-289
A journey from Paris to Marrakesh	
7.1 GATT, The Uruguay Round and The Dunkel Draft	224
7.2 Trade-Related Aspects of Intellectual Property rights (TRIPs)	226
7.3 Transitions agreement under TRIPs	232
7.4 Problems embedded in Art.27.3(b)	233
7.5 1999 Review of Article 27.3(b) of TRIPs	234
7.6 The Doha Mandate	236
7.7 The Debate	237
7.8 The African Model Law	239
7.9 TRIPs – Ethical, Social and Economical Issues	241
7.10 TRIPs and its effect on Health Sector	244
7.11 The Convention on Biological Diversity, 1993	249
7.12 Union for the Protection of New Varieties of Plants (UPOV)	254
7.13 UPOV in India	258
7.14 Indian Statutes on IPR	265
7.15 The Indian Patents Act, 1970	268
7.16 The Patents (Amendments) Act, 1999	270
7.17 The Patents (Amendments) Act, 2002	273
7.18 Salient features of the Act	274
7.19 The Patents (Amendments) Act. 2005	275

7.20	The Protection of Plant Varieties and	278
	Farmers' Rights Act, 2001	
7.21	Biodiversity-Related Community Intellectual	283
	Rights Act, 2002	
Chapto	er 8. Conclusion and Recommendation	290-320
8.1	Suggestions	292
	a) Trade Related Aspects of Intellectual Property Rights	292
	b) Protection of Plant Varieties and	301
	Farmers' Rights Act, 2001	
	c) Indian Patent Act	304
8.2	Harmonizing Intellectual Property Rights & Biodiversity	312
8.3	Recommendations	316
8.4	Conclusion	318
Bibliog	graphy	321
Acronyms		324