Contents

1 UDPCR 18
1.1 Building bye laws essentially aims: --- 18
1.2 What to achieve by BB and DCPR 18
1.3 Set of regulations categorized into 15 chapters 19
1.4 CHAPTER – 1 ADMINISTRATION 19
1.4.1 Extent and Jurisdiction 19
1.4.2 Definitions 19
1.4.3 P-LINE 20
1.4.4 COMMON AREA 20
1.4.5 Authority – means (for the purpose of this DCPR) 21
1.4.6 High-rise Building And Special Building 22
1.4.7 Special Building means 22
1.4.8 Originating plot and receiving plot 25
1.4.9 Standard Requirement of Various Parts of Buildings 27
1.4.10 Standard Requirement of Various Parts of Buildings. 27
1.4.11 Additional requirements in case of Housing Schemes 36
1.5 CHAPTER – 2 DEVELOPMENT PERMISSION AND COMMENCEMENT CERTIFICATE 37
1.5.1 Permission where Not Necessary 37
1.5.2 Development undertaken on behalf of Government 38
1.5.3 Procedure for Obtaining Permission. 38
Liability of developer in Land Subdivision / Group Housing Schemes (Layouts) 40
1.5.4 Deemed Permission- 41
1.5.5 Approval of Building permission on Risk Based Classification 41
1.5.6 Development Charges – 45
1.5.7 Security charges – 45
1.5.8 Discretionary Powers – Relaxations in Specific Cases 45
1.5.9 REQUIREMENT FOR BUILDING SITES/ DEVELOPMENT 46
(a) In non-congested areas 47
A. Group Housing Scheme 48
1.5.10 Recreational Open Spaces 50
1.5.11 OPEN SPACE FOR EDUCATIONAL PURPOSE- 51
 Provision of Amenity Space. 51
1.5.12 Net Plot Area and Computation of FSI 51

1.5.13 Relocation of DP-RP sites / roads 52
1.5.14 AMALGAMATION OF PLOTS 52
1.5.15 Residential Zone (R-1) 54
Uses permissible- General permissible uses and accessory uses to the principal use are mention in list 55
1.5.16 Residential Zone (R-2) 55
1.5.17 INDUSTRIAL ZONE- 56
1.5.18 Amenity space 56
1.5.19 Agricultural Zone. 57
1.6 Chapter 5 ADDITIONAL PROVISIONS FOR REGIONAL PLAN AREAS 58
1.7 General Building Requirements – Setback, Marginal Distance, Height and Permissible FSI 59
1.7.1 FSI FOR CONGESTED AND NON-CONGESTED AREA 59
1.7.2 FSI - Congested Area (For ALL Municipal Corporation) 60
1.7.3 FSI - Congested Area (For Remaining Authorities/Areas) 60
1.7.4 FSI – NON CONGESTED Area 60
1.7.5 FSI – NON CONGESTED Area 61
1.7.6 What is Ancillary FSI 61
1.7.7 P-LINE 62
1.7.8 Conditions for utilization of above FSI/TDR 62
1.7.9 FSI FOR PLOT IN PLOTTED LAYOUT :- COSIDERING PRORATA FACTOR 66
1.7.10 MARGINAL DISTANCES / SET BACKS 66
1.7.11 MARGINAL DISTANCES / SET BACKS NON-CONGESTED 67
1.7.12 Marginal Distances for Buildings of Higher Heights (More than 24 mtr) 71
1.7.13 HEIGHT OF BUILDING 73
1.7.14 INTERIOR AND EXTERIOR CHOWK 73
1.7.15 PERMISSIBLE PROJECTIONS IN MARGINAL OPEN SPACES 75
1.7.16 PROVISION OF RECREATIONAL FLOOR 76
1.1 CHAPTER 7 Higher FSI For Certain uses 76
1.8 CHAPTER – 8 Parking spaces 79
1.9 CHAPTER: 10 ACCOMODATION RESERVATION AND TRANSFERABLE DEVELOPMENT RIGHTS (TDR) 84
TRANSFERABLE DEVELOPMENT RIGHTS (TDR) 87
1.9.1 FSI Non Congested Area: 89
1.10 CHAPTER 13: SPECIAL PROVISIONS FOR CERTAIN BUILDINGS 90
1.10.1 SOLID WASTE MANAGEMENT 93

1.11 CHAPTER 14: SPECIAL PROVISIONS /SCHEMES / POLICIES....94
1.12 Integrated Township POlicy....98
1.13 CHAPTER – 15 REGULATIONS FOR SPECIAL ACTIVITIES / PLANS....106
1.13.1 Section 44: Application for permission for development....107
1.13.2 Section 45. Grant or refusal of permission.....107
1.13.3 Section 46: Provisions of Development plan to be considered before granting permission. 107
1.13.4 Section 48 Lapse of Permission 107
1.13.5 Section 49: Obligation to acquire land on refusal of permission or on grant of permission in certain cases.....108
1.13.6 Section 51 108
1.13.7 Section 52 108
1.13.8 Section 54 109
1.13.9 SSection 53 109
1.13.10 52 (1) (a) or (c) 109
1.13.11 Section 53 109
1.13.12 Section 55 110
1.13.13 Section 56 110
1.13.14 Section 56 (A) Punishment for failure to take action. 110
1.13.15 Section 58-Intimation in respect of Development undertaken on behalf of Government....111
1.14 Approval of Building permission on Risk Based Classification 111
1.15 Premium Charges – 114
1.16 Discretionary Powers – Relaxations in Specific Cases 114
1.17 Drafting Error- 114
1.18 REMOVAL OF DIFFICULTIES.....115
1.19 REDEVELOPMENT OF OLD DILAPIDATED/ DANGEROUS BUILDINGS 115
1.19.1 7.6.1 Redevelopment of multi-dwelling buildings of owner / society. 115
1.19.2 7.6.2 Redevelopment of tenanted buildings....115
1.20 DEVELOPMENT OF HOUSING FOR EWS/ LIG....116
1.20.1 In Residential Zone-....116
1.20.2 In Agricultural Zone -....117
1.20.3 For Regional Plan Area -....117
1.21 Affordable Housing Scheme 118
1.22 INCENTIVE FOR GREEN BUILDINGS....120
1.23 CONSERVATION OF HERITAGE BUILDINGS....120

1.23.1 Reparation of List of Heritage Buildings, Heritage Precincts and Natural Features 120
1.23.2 Restriction on development, Redevelopment/repairs– 121
1.23.3 Incentive uses for Heritage Buildings– 121
1.23.4 Maintaining Skyline – 121
1.23.5 Composition of Heritage Conservation 123
1.23.6 Heritage Conservation Fund 123
2 URBANISATION, GOVT. SCHEMES AND MISSIONS 126
2.1 Atal Mission for Rejuvenation and Urban Transformation (AMRUT) 126
2.1.1 Thrust Areas 126
2.1.2 Coverage 126
2.1.3 The Mission 126
2.1.4 URBAN REFORMS AND CAPACITY BUILDING 129
2.2 Shyama Prasad Mukherji Rurban Mission 130
2.2.1 About the Mission 130
2.2.2 Integrated Cluster Action Plan (ICAP) 130
2.3 Maharashtra Samruddhi Corridor 132
2.4 PMAY - Pradhan Mantri Awas Yojna (PMAY) 132
2.4.1 Definition: 133
2.4.2 Implementation Methodology: 134
2.4.3 What is Pradhan Mantri Awas Yojna Gramin? 136
2.5 PMAY 2.0 139
2.5.1 Definitions for the Purpose of the Mission 139
2.6 Pradhan Mantri Awas Yojana - Urban 2.0 (PMAY-U 2.0) Guidelines 141
2.6.1 Scope of PMAY-U 2.0 141
2.6.2 Implementation 141
2.6.3 Scheme Structure 142
2.6.4 Beneficiary Definition 142
2.6.5 House Construction Requirements 142
2.6.6 Civic Amenities & Additional Provisions 143
2.6.7 Residency Requirement 144
2.6.8 Participation Requirements 144
2.6.9 Ownership Criteria 144
2.6.10 Stamp Duty & Registration Charges 145
2.6.11 Beneficiary Declaration 145
2.6.12 Resident Associations & Legal Compliance 145

2.7 Coverage 145
2.7.1 Coverage Area 145
2.7.2 Cities/Towns Inclusion 146
2.8 Eligibility Criteria 146
2.8.1 Beneficiary Eligibility 146
2.8.2 Prior Beneficiary Exclusion 146
2.9 Income Categories 146
2.10 Preference to Vulnerable Groups 146
2.11 Parent Beneficiary Clause 147
2.12 Excluded Sanctioned Houses 147
2.13 Avoiding Duplication 147
2.14 Aadhaar Requirement 147
2.15 Implementation Methodology 148
2.15.1 State/UT Reforms & MoA Requirement 148
2.15.2 Inclusion of Additional/New Cities 149
2.15.3 Nodal Agency for Implementation 149
2.15.4 Housing Demand Assessment 149
2.15.5 Inclusion of Special Focused Groups (SFG) 149
2.15.6 City-Wise Housing Plan Submission 149
2.15.7 Geo-Tagging & Digital Monitoring 150
2.15.8 Central Assistance & Geo-Tagging 150
2.15.9 Timely Project Completion 151
2.15.10 Lock-in Period for Houses 151
2.15.11 Row Housing Projects under AHP 151
2.15.12 Awareness & Branding 151
2.15.13 Promotion of Innovative Technologies 152
2.15.14 Role of Central Sanctioning & Monitoring Committee (CSMC) 152
2.16 PMAY-U 2.0 Verticals 153
2.17 Beneficiary Led Construction (BLC) 153
2.17.1 Eligibility & Land Ownership 153
2.17.2 House Standards 153
2.17.3 Application & Approval Process 154
2.17.4 Funding & Instalments 154
2.17.5 Completion & Monitoring 154
2.18 Interest Subsidy Scheme (ISS) 159

2.18.1 Overview 159
2.18.2 Eligibility Criteria 159
2.18.3 Interest Subsidy Details 160
2.18.4 Summary Table of ISS Features 160
2.18.5 Exclusion (Ineligibility) Criteria 161
2.19 Role of Central Nodal Agencies (CNAs)....162
2.20 Implementation & Monitoring by CNAs 162
2.20.1 Beneficiary Registration Process....162
2.20.2 Subsidy Disbursement Process 162
2.20.3 Subsidy Disbursement Conditions 162
2.20.4 Layout Plan Requirement 162
2.20.5 Lending Practices by PLIs 162
2.20.6 Role of State Level Nodal Agency (SLNA)....163
2.20.7 Monitoring by State Level Bankers Committee (SLBC)....163
2.20.8 Updates on Bank Officer Details....163
2.20.9 Prevention of Duplicate Benefits....163
2.20.10 Geo-Tagging of Houses 163
2.20.11 Administrative Expenses for CNAs....163
2.20.12 Flowchart: Interest Subsidy Scheme Process 163
2.21 Technology & Innovation Sub-Mission (TISM) 164
2.21.1 Technology Sub-Mission (TSM) under PMAY-U....164
2.21.2 Disaster-Resistant & Climate-Friendly Technologies....165
2.21.3 Coordination with Regulatory & Administrative Bodies 165
2.21.4 Key Focus Areas of TISM in Design & Planning....166
2.21.5 Collaboration with Technical Institutions....166
2.21.6 Global Housing Technology Challenge (GHTC) 167
2.21.7 Light House Projects (LHPs) 167
2.21.8 Technology Innovation Grant (TIG) Under TISM 167
2.22 Special Innovative Projects under PMAY-U 2.0 167
6.10 167
2.23 Convergence with Other Schemes....168
2.23.1 Convergence with Centrally Sponsored Schemes 168
2.23.2 Schemes Integrated with PMAY-U 2.0....168
2.23.3 Redevelopment of Slums on Government Land....170
2.23.4 Convergence with Aspirational Districts Program....170

2.24 Funding Pattern 170
2.24.1 Cost Sharing for PMAY-U 2.0 170
2.24.2 Loan Availability 170
2.25 Mechanism for Release of Central Assistance 170
2.25.1 Allocation & Disbursement 170
2.25.2 Release of Funds 170
2.25.3 Instalment-wise Release 171
2.25.4 Flexibility in Fund Release 171
2.26 Tracking & Monitoring 171
2.27 Mechanism for Release of Central Assistance under Interest Subsidy Scheme ...171
2.27.1 Fund Release to CNAs 171
2.27.2 Subsidy Disbursement by CNAs to PLIs 171
2.27.3 Processing Fee for PLIs 172
2.27.4 Application Process for EWS/LIG Beneficiaries 172
2.28 Capacity Building Activities 172
2.28.1 Allocation & Utilization 172
2.28.2 Annual Capacity Building Plan (ACBP) 173
2.28.3 Fund Release Mechanism 173
2.28.4 Funding Pattern for Capacity Building Activities 173
2.29 Establishment of Technical Cells 173
2.29.1 State Level Technical Cell (SLTC) 173
2.29.2 City Level Technical Cell (CLTC) 174
2.29.3 Information, Education & Communication (IEC) 174
2.29.4 Social Audit 175
2.29.5 Administrative & Other Expenses (A&OE) 175
2.29.6 Third Party Quality Monitoring Agencies (TPQMA) 175
2.30 Administration and Implementation Structure 175
2.30.1 Central Level: 175
2.30.2 State/UT Level: 176
2.30.3 Other Administrative Measures: 177
2.31 Unified Web Portal & Management Information System (MIS) 178
2.31.1 Web Portal: 178
2.31.2 MIS Features: 178
2.31.3 Training & Support: 178
2.32 Affordable Housing Policy: 178

2.33 Reforms to be Implemented:....178
2.34 Central Government Support:....179
2.35 Additional Support (in consultation with Ministry of Finance):....179
2.36 Monitoring & Evaluation....179
2.36.1 Three-Level Monitoring System:....179
2.37 Mid-Term Evaluation:....180
2.38 Smart City:....180
2.38.1 Definition of Smart City:....180
2.38.2 Objectives of Mission:....180
2.38.3 Core Infrastructure Elements in Smart City:....180
2.38.4 Some Smart Solutions:....180
2.38.5 Features of Smart City:-....181
2.39 Strategy:-....182
2.39.1 City Improvement (Retrofitting):-....182
2.39.2 City Renewal (Redevelopment):-....182
2.39.3 City Extension (Green field Development) :-....182
2.40 Pan City Development (To cover larger part of the city) :-....182
2.41 How many Smart Cities in each State?....183
2.42 Implementation of Smart Mission:....183
2.43 Financing of Smart Cities:....183
- Retrofitting....184
- Redevelopment....184
- Greenfield....185
- Pan-city....185

2.44 COVERAGE AND DURATION....185
2.45 FINANCING OF SMART CITIES....186
2.46 Heritage City Development and Augmentation Yojana (HRIDAY)....186
2.47 State Housing Policy (Draft)....186
2.47.1 Overview of the State....186
2.47.2 Administrative Divisions....187
2.47.3 Urban Classification (As per Census of India)....188
2.47.4 Housing & Infrastructure....189
2.48 Maharashtra State Housing Policy, 2024 – Summary....191
2.48.1 Policy Background....191
2.48.2 Introduction....191

2.48.3 Overview of Current Housing Situation in Maharashtra 192
2.48.4 Housing Demand Assessment & Policy Implementation 193
2.48.5 Existing Legal and Regulatory Framework in Maharashtra 194
2.48.6 Existing Housing Policies and Programs in Maharashtra 196
2.48.7 Existing Housing Sector Institutions in Maharashtra 198
2.48.8 Policy Objectives & Principles 205
2.48.9 Objectives of the Policy 205
2.48.10 Principles of the Policy 207
2.48.11 Policy Measures: Green-Field Development 209
2.48.12 Definition and Criteria 209
2.48.13 Proposed Reforms 212
2.49 Summary of Maharashtra State Housing Policy, 2024 213
2.49.1 Senior Citizen Housing 215
2.49.2 Student Housing – Key Points 217
2.49.3 Government Initiatives 218
2.49.4 Slum Rehabilitation & Redevelopment (Policy Measures) 230
3 Fundamentals of Remote Sensing and its Applications in Urban Planning 253
3.1 What is Remote Sensing? 253
3.2 Why Remote Sensing? 253
History of Remote Sensing 253
3.3 History of Remote Sensing 254
3.4 Milestones in the History of Remote Sensing 254
3.5 Remote Sensing Process 256
3.6 Components of Remote Sensing 256
3.7 Types of Remote Sensing 257
3.8 Remote Sensing Data Collection 257
3.9 New Emerging Remote Sensing Data Collection Technology 258
• **Electromagnetic Radiation** 258
3.9.1 Electrical field 258
3.9.2 Magnetic field 258
3.9.3 Speed of light 259
3.9.4 Electromagnetic Spectrum 259
3.10 Spectral Reflectance and Earth Surface Interaction 259
3.11 Characteristics of Images 260
3.11.1 What is an image / digital image? 260

3.11.2 What is an photograph? 260
3.12 Satellites and Sensors 261
3.12.1 Types of satellites can be classified by their orbit characteristics. 261
3.13 Specification of Indian Earth Observation Satellites 262
3.13.1 Sensors installed on various platforms like… 263
3.13.2 Active sensor 265
3.13.3 Thermal sensors: 266
3.14 Types of Resolution 266
3.14.1 Hypersepctral 267
3.14.2 Landsat TM 30m x 30m QuickBird 67cm x 67cm 267
3.14.3 Radiometric Resolution: (Landsat TM 8 bits, SPOT 8 bits, IKONOS 11 bits) ..267
3.14.4 8 bit 16 bit 268
3.14.5 T: 11:00 T: 11:30 T: 12:00 T: 12:30 268
3.14.6 13 May 1973 3 May 2000 21 Feb 2006 268
3.15 Image Analysis and Interpretation 269
3.15.1 Data Pre-processing 269
3.15.2 Radiometric correction 269
3.15.3 Geometric correction 269
3.16 Remote Sensing Applications in Urban Planning 270
3.16.1 Land use Land Cover Classification (LULC) 270
3.16.2 Monitoring and Analysis of Deforestation Process Using Remote Sensing ..270
3.16.3 Urban Greenness (Eco-friendly Walk Score Calculator) 271
3.16.4 Surface Steepness Measurement from LIDAR Remote Sensing 272
3.16.5 Watershed and Environmental Impact Assessment 272
3.16.6 Urban Sprawl 273
3.16.7 Urban Growth Modeling 273
3.16.8 Mapping And Change Analysis In Mangrove Forest By Using Landsat Imagery 275
3.16.9 Agriculture and Soils 276
3.16.10 Forest & Environment 277
3.16.11 Geology and Geomorphology 277
3.16.12 Land Resources 277
3.16.13 Ocean Science 277
3.16.14 Water Resources 278
4 Global Positioning System and Applications 279
4.1 Overview 279

4.1.1 Introduction and Overview of GPS 279
4.1.2 GPS Segments 279
4.1.3 How GPS works 279
4.2 Introduction and Overview of GPS 279
4.3 Characteristics of GPS 279
4.4 GPS Segments 280
4.4.1 Space Segments 280
4.4.2 Control Segments 281
4.4.3 User Segments 281
4.4.4 GPS Satellite Constellation 282
4.5 What are satellite constellations? 282
4.6 Types of GPS 282
4.6.1 DGPS: 282
4.6.2 A-GPS: 283
4.6.3 S-GPS: 283
4.6.4 Non-differential-GPS: 284
4.7 Applications of GPS 284
4.7.1 Smart Garbage Collection Using GPS & Shortest Path Algorithm 285
4.7.2 GPS-Based Vehicle Navigation System for Finding Parking Lots 285
4.7.3 Disaster Alert Notification and Rescue Management through Smart Phones Using GPS 286
4.8 Municipals 287
4.9 Drone / UAV 288
5 Introduction to Geographic Information System (GIS) 289
5.1 History of GIS 289
5.2 Geospatial Technology 290
5.3 What is GIS? 291
5.4 GIS Data Model 291
5.5 Components of GIS 292
5.6 GIS Data Models / Types 292
5.7 Functions of GIS 293
5.8 Creation of GIS Data / Database 293
5.8.1 Data Accumulation: 294
5.8.2 Data Capture or Conversion, ...294
5.8.3 Georeferencing & Projection: 294
5.8.4 Entering Spatial Data (Digitization): 294

5.8.5 Data Attribution: 294
5.8.6 Error Handling: 294
5.8.7 GIS Analysis: 294
5.8.8 Georeferencing & Projection 295
5.9 Analysis Methods: I. Logical Overlay 295
5.10 Analysis Methods: II. Geoprocessing 296
5.11 Applications of GIS 296
5.11.1 Urban Development 296
5.11.2 Rural Development 296
5.11.3 Land Resources 296
5.11.4 Water Resources 297
5.11.5 Governance 297
5.11.6 Ocean Science 297
5.11.7 Forest & Environment 297
5.11.8 Agriculture and Soils 297
5.11.9 Geology and Geomorphology 297
5.11.10 Governance 298
5.11.11 Renewable Energy 298
5.12 Government Resolutions and Design Standards 298
5.12.1 Background: 298
5.12.2 The NUIS Scheme comprises two major components as given under: 298
5.13 Background: 299
5.14 Preparation of Development Plan (DP) as per MR & TP Act, 1966: 299
5.14.1 Overview of Preparation of GIS based Existing Land Use (ELU): 300
5.14.2 Acquisition of High Resolution Images for the area for which DP is to be prepared 300
5.14.3 Establishment of Ground Control Network 300
5.15 DGPS: 300
5.16 Georeferencing of High-Resolution Images 301
5.17 Total Station Survey 301
5.17.1 Basemap Preparation 301
5.17.2 Field Verification & Correction of Basemap 302
5.17.3 Superimposition of Revenue Maps 302
5.17.4 Superimposition of Sanctioned Layouts 302
5.17.5 Mapping of Boundaries of other Important Features such as 302
5.17.6 ELU Data Collection 302

5.17.7 Preparation of ELU 302
5.17.8 ELU Map Verification 303
5.18 Analysis Example: Preparation of Development Plan & Urban Planning 304
5.18.1 Urban Sprawl 304
• **Urban Growth Modeling** 305
5.18.2 Slope Analysis for Developable Area. 306
5.19 Introduction to Total Station and its Applications 306
5.20 Introduction 306
5.21 Surveying Methods 307
5.22 Traditional Surveying Methods: 307
5.23 Advanced Surveying Methods: 307
5.24 Types of Total Station 308
5.24.1 Manual Total Station 308
5.24.2 Robotic Total Station 308
5.24.3 Reflector less Total Station 308
5.25 How Total Station Works 308
5.25.1 Angle Measurement 308
5.25.2 Distance Measurement 308
5.25.3 Data Collection 308
5.25.4 Integration with Software 308
5.26 Applications of Total Station 308
• Precision Measurement: 308
6 RIGHT TO INFORMATION ACT AND RIGHT TO SERVICE ACT 311
6.1 Historical Background of RTI Act, 2005: 311
6.1.1 1950 Indian Constitution- 311
6.1.2 1975 State of Uttar Pradesh Vs. Raj Narain Judgement- 311
6.2 Key Points 312
6.3 Objectives of the Act- 312
6.4 Points to be noted u/s 8: 317
6.5 Section 11 Third Party Information: 319
6.6 Section 12 CENTRAL INFORMATION COMMISSION 319
6.7 Section 15 STATE INFORMATION COMMISSION 320
6.8 Section 19: Appellate Authorities under the Act 320
6.9 Section 18: Complaint to Information Commissions (IC) 321
6.10 Points to be noted- 321

6.11 The Maharashtra State Commission for Right to Service....322
6.11.1 RTS Act: Highlights....322
6.11.2 Structure of Authorities under RTS....322
6.11.3 Role & Action by Designated Officer....323
6.11.4 Where to Apply for Appeal?....323
6.11.5 Role & Action by 1st Appellate Authority....324
6.11.6 Role & Action by 2nd Appellate Authority....324
6.11.7 Role & Action by 3rd Appellate Authority....325
6.11.8 How to Apply:....325
6.11.9 Aaple Sarkar RTS Portal – Online Process Flow....326
6.11.10 Powers and functions of Commission....326
6.11.11 Penalty....326
7 Environment Protection Act, 1986....327
7.1 Environmental Impact Assessment (EIA) - Overview....327
7.2 Key Values of EIA....327
7.3 Types of EIA....327
7.4 Evolution of EIA....327
7.5 Types of EIA in India....328
7.6 Environmental Management Plan (EMP)....328
EIA Process Stages....328
7.7 Key Objectives of EIA....329
7.8 Importance of Public Participation in EIA....329
7.9 Differences Between EIA Notification 2006 and Draft 2020....330
7.10 Types of Impacts Considered in EIA....330
7.11 Legal and Institutional Framework in India....331
7.12 Stakeholders in EIA....331
7.13 Environmental Clearance Process in India....331
7.14 Challenges in EIA....331
7.15 Decentralization of Environmental Clearance....332
7.16 Importance of Environmental Impact Assessment (EIA)....332
7.17 Principles and Features of EIA....332
7.18 Examples of EIA Applications....332
7.19 Legal Framework for EIA in India....333
7.20 Advantages of EIA....333
7.21 Polluter Pays Principle (PPP)....334

7.21.1 Definition: 334
7.21.2 Key Objectives:....334
7.21.3 Evolution of Polluter Pays Principle....334
7.22 Implementation of PPP: International Examples....334
7.23 Polluter Pays Principle in India....334
7.24 Examples of PPP Enforcement in India....335
7.25 Key Entities Enforcing PPP in India....335
7.26 Eco-Sensitive Zones (ESZs)....335
7.27 Notable Eco-Sensitive Zones in India....336
7.28 Noise Pollution Standards in India....336
7.29 Greenhouse Effect and Global Warming....337
7.30 Coastal Regulation Zones (CRZs)....338
7.31 E-Waste Management....339
7.32 Environmental Protection under the Indian Constitution....340
7.33 Key Case Laws in Environmental Protection....341
7.34 Role of the Ministry of Environment, Forest and Climate Change (MoEFCC)....341
7.35 National Green Tribunal (NGT)....341
7.36 Sustainable Development Goals (SDGs) and Environmental Protection....342
7.37 Waste Management and Recycling in India....343
7.38 Environmental Laws in India – Key Amendments and Acts....344
7.39 The Water (Prevention and Control of Pollution) Act, 1974....344
7.40 The Air (Prevention and Control of Pollution) Act, 1981....344
7.41 The Forest (Conservation) Act, 1980....344
7.42 National Action Plan on Climate Change (NAPCC)....345
7.43 The Role of Technology in Environmental Protection....346
7.44 Wastewater Treatment and Water Conservation....347
7.45 Climate Change Adaptation and Mitigation in India....347
7.46 Air Pollution and Its Control....348
7.47 Waste Management and Recycling....348
7.48 Water Pollution and Its Control....349
7.49 Climate Change and Its Impact on India....350
7.50 Renewable Energy and Sustainability....351
7.51 International Environmental Cooperation....352
7.52 Sustainable Development Goals (SDGs)....352
7.53 Climate Change and Global Warming....353

7.54 Renewable Energy Sources 353
7.55 Biodiversity and Conservation 354
7.56 Waste Management 354
7.57 International Environmental Agreements 356
7.58 EIA Notification 2006 358
- **Introduction** 358
7.58.1 Silent features of EIA Notification 2006 359
7.59 EIA cycle and procedures 360
7.59.1 Screening 361
7.59.2 Scoping 362
7.59.3 Baseline Data 362
7.59.4 Impact Prediction 363
7.59.5 Public Hearing 363
7.59.6 Environment Protection under Constitution of India 365
A) The Environment (Protection) Act, 1986: 367
- **B) The Water (Prevention and Control of Pollution) Act, 1974:** 368
- **c) The Air (Prevention and Control of Pollution) Act, 1981:** 369
- **D) The Biological Diversity Act, 2002 and Biological Diversity Rules:** 370
- **E) Wildlife Protection Act, 1972:** 370
- **F) Forest (Conservation) Act, 1980:** 371
- **G) The National Environment Tribunal Act, 1995: (REPEALED)** 371
H) The National Green Tribunal Act, 2010: 372
7.60 Noise standards (as notified in Environment (Protection) Rules, 1986) 373
7.61 Greenhouse Effect 373
7.62 Eco Sensitive Zone: 374
7.62.1 Activities Allowed in ESZs 374
7.62.2 Significance of ESZs 374
7.63 Polluter Pay Principal 375
7.64 Costal Regulation Zone 376
7.64.1 Purpose of CRZ Regulation: 377
7.64.2 History of CRZ 377
7.64.3 Primary Classification of CRZ 379
7.65 Types of Surveys 385
7.65.1 Socio-Economic Survey 386
7.65.2 Land use/utilisation Surveys 386