

CONTENT

CHAPTER NO.	DESCRIPTION	PAGE NO.
I	CERTIFICATE	
	CONTENT	i-ix
	LIST OF TABLES AND CHART	x
	LIST OF FIGURES	xi-xii
	LIST OF PLATES	xiii-xv
I	<u>INTRODUCTION</u>	1-16
	PURPOSE AND SCOPE	2
	GEOGRAPHICAL LIMITS	3
	PHYSIOGRAPHY	5
	LAND USE AND COMMUNICATION	9
	APPROACH AND METHODOLOGY	13
	PREVIOUS WORK	15
II	<u>GEOLOGICAL FRAMEWORK</u>	17-29
	GENERAL CONSIDERATIONS	18
	STRATIGRAPHY AND ROCK TYPE DISTRIBUTION	19
	Metamorphic and Granitic Gneisses	19
	Bagh Beds	20
	Deccan trap	21
	Laterites	23
	Tertiary rocks	23
	Quaternary rocks	24

CHAPTER NO.	DESCRIPTION	PAGE NO.
	STRUCTURAL ASPECTS	27
	Fracture pattern	27
	Neotectonism	28
	EUSTASY	28
III	<u>TOPOGRAPHY</u>	30-75
	PHYSIOGRAPHIC DIVISIONS	31
	Div. 1 NORTH EASTERN ROCKY TO ALLUVIAL UNDULATING TERRAIN (N. OF NARMADA)	32
	Unit 1 I The Eastern Trappean Ridges and hills. (Satpuras N. of Narmada)	34
	Subunit 1I (i) Ranwad - Phulmal hills	35
	1I (ii) Kawant - Bakhatgrah hills.	37
	1I (iii) Amba Dungar and Karipani hills.	37
	1I (iv) Kajalmata Dungar and Gadher hills.	38
	1I (v) Vadgam hills.	39
	Unit 1 II The Western Hilly and Undulating Alluvial Plains.	39
	Div. 2 SOUTHEASTERN RUGGED BASALTIC HILLS (S. OF NARMADA)	42
	Unit 2 I The Eastern Hilly Terrain	43
	1 Dhamanmal Dungar	44
	2 Kokam Dungar	44

CHAPTER NO.	DESCRIPTION	PAGE NO.
	3 Vinjiya Dungar	44
	4 Sakdu Dungar	45
	5 Mathasar Dungar	45
	6 Jharwani Dungar	45
	7 Lamba Sag Dungar	45
	8 Juna Raj Dungar	46
	9 Hindwa Dungar	46
	1 Som Khadi	47
	2 Kanji khadi	47
	3 Bhanumati nadi	47
	4 Dhirkhadi	47
	5 Shamariya khadi	47
	6 Punch khadi	48
	7 Kaludi khadi	48
	8 Sankali khadi	48
	Unit 2 II South Eastern Hilly Terrain	48
	Subunit 2 II (i) The Mal-Samot dissected plateau.	50
	2II (ii) The Hills between the khadis of Terav and Bogla	51
	1 Dandawadi hills	53
	2 Mathamogra - Morjadi hills	53
	3 Northern group of hills	53
	2 II (iii) The Mosda Group of hills.	53
	1 Mosda Dungar	54
	2 Babadoti Dungar	54

CHAPTER NO.	DESCRIPTION	PAGE NO.
	2 II (iv) The Sagbara group of Hills	55
	1 Gardha Dungar	55
	2 Devidev Dungar	55
	3 Sagbara Dungar	56
Unit 2	III The Western Hilly Terrain (S. of Narmada)	56
	Subunit 2 III (i) The Eastern sloping Ridges.	57
	2 III(ii) The Western Sloping Ridges	59
Div. 3	THE UPLANDS (S. OF NARMADA)	60
Unit 3	I Dediapada Uplands	61
	1 Ghantoli, Pangam and Solia hills	62
	2 Besana, Sakwa and Dhanor lines of hills.	62
	3 Ralda, Khokhraumar, Jharnawadi, Chuli and Garda hills	63
	4 Jamni, Kevdi and Patadi chain of hills	63
	1 Mohan khadi	64
	2 Kanjai khadi	64
	3 Kukalda khadi	64
	4 Dhaman khadi	64
	5 Ralda - Besana khadi	64

CHAPTER NO.	DESCRIPTION	PAGE NO.
	Unit 3 II The Netrang Uplands	65
	1 Kuri ridge	66
	2 Galiba ridge	66
	3 Rupghat group of narrow linear ridges	66
	Unit 3 III The Kadvali Uplands	67
	1 Khaseli Dungar	68
	2 Kadvali Hills	68
	3 Jaspur and Rampur group of hills	68
	4 Kariya Bungar	69
	Div.4 THE COASTAL PLAINS (S. OF NARMADA)	69
	Unit 4 I The Tertiary Plains (Eastern Unit)	70
	4 II The Alluvial Plains (Central)	71
	4 III The Coastline (Western)	72
IV	<u>DRAINAGE</u>	76-107
	GENERAL FEATURES	77
	Lower Narmada river system	77
	Main Rivers of Lower Narmada river system	80
	North of Narmada river	80
	HERAN RIVER	80
	Aswan River	81

CHAPTER NO.	DESCRIPTION	PAGE NO.
	Men river	81
	Ruwel river	82
	South of Narmada river	82
	Devganga river	82
	Terav river	83
	Karjan river	84
	Kim river	84
	Amaravati river	85
	Kaveri river	86
	Madhuvati river	86
	General Characters of the Drainage	86
	Longitudinal Profiles	88
	MORPHOMETRIC STUDY	92
	Comparative Morphometric Analysis of the River Basins	98
	DRAINAGE CHARACTERISTICS	103
IV	<u>RELIEF AND SLOPE ANALYSIS</u>	108-128
	GENERAL FEATURES	109
	RELIEF ANALYSIS	111
	SLOPE ANALYSIS	115
	Profile I : Dhamanmal Dungar - Mal Samot Plateau	116

CHAPTER NO.	DESCRIPTION	PAGE NO.
	II : Dhamanmal Dungar to Sagbara hills	117
	III : Dhamanmal Dungar to Netrang Uplands	118
	IV : Dhamanmal Dungar to Tertiary Coastal Plains	119
	V : Dhamanmal Dungar to Aliabet	120
	VI : Dhamanmal Dungar to Jadeshwar	121
	VII : Dhamanmal Dungar to Sinor Village (across Narmada)	122
	VIII : Dhamanmal Dungar to Heran River	122
	IX : Dhamanmal Dungar to Phenai Mata hill and Heran river	123
	X : Dhamanmal Dungar to Rami River in Heran river valley	124
	DISCUSSION	125
VI	<u>LAND SCAPE EVOLUTION</u>	129-147
	GENERAL CONSIDERATIONS	130
	CONTROLLING FACTORS	131
	Geological Control	131
	Lithological	131
	Structural	131
	Climatic control	132
	Temperature	133
	Rainfall	134
	Humidity	135

CHAPTER NO.	DESCRIPTION	PAGE NO.
	Winds	136
	OPERATING PROCESSES	136
	Weathering	137
	Fluvial Action	142
	1 Terrain North of Narmada	142
	2 Terrain South of Narmada and east of Karjan	144
	3 Terrain South of Narmada and west of Karjan	145
	Coastal processes	146
	LANDFORMS	147
VII	<u>ENVIRONMENTAL ASPECTS</u>	148-168
	GENERAL CONSIDERATIONS	149
	SURFACE WATER	150
	SUBSURFACE WATER	151
	FLOODS	153
	1 Flooding of the hilly terrains	154
	2 Flooding of the smaller rivers	154
	3 Floods in Narmada	155
	FORESTS	157
	AGRICULTURE	161
	DEVELOPMENTAL ACTIVITIES	162

CHAPTER	DESCRIPTION	PAGE NO.
	Agriculture	163
	Mining Activities	165
	Engineering Projects	165
	Narmada river Project	165
	Karjan Irrigation Project	166
	Heran River Project	167
	Check Dams	168
VIII	<u>RESUME</u>	169-181
	REFERENCES	182