CHAPTER V
TERRAIN CHARACTERISTICS

TERRAIN CHARACTERISTICS

INTRODUCTION

Any area of high altitude hilly terrain and the low altitude, plain topography can give rise to the variety of landforms. The present area under investigation is of similar type having high altitude hills in the east and coastal plain topography towards the west.

In order to understand the geomorphology, consideration of the various morphometric parameters can be of immense use. These parameters are useful to know the terrain characteristics of any region. Considering this fact, the study of different geomorphic variables like relief, slope, stream gradient values have been used. The interrelation between these geomorphic variables can help to interprete the type of landforms and therefore the various terrain characteristics have been discussed in the following paragraphs.

Spatial pattern of relative reli ef

Relative relief is a significant morphometric attribute for the determination of dissection and the assessment of the stage of terrain development. It also signifies the morphological characteristics of the region. According to Dubey, (1986) the local relief or maximum relief or amplitude of available relief is defined as the difference in height between the highest and the lowest points in a unit

rectangular area. This method has been suggested by Savindra Singh (1978b and 1980). The data obtained has been classified into six categories of relative relief viz. very low (0-20 m.) low (20-80 m.) moderate (80-140 m.) moderately high (140-200 m.) high (200-260 m.) and very high (above 260 m.) height which have been used for grouping of relative relief in the present investigation (Table 5.1). Relative relief maps for all the basins of fifth order have been prepared and are presented in Figs. 5.1.a, b, c, d, e, f, g and h.

The statistical parameters like mean, standard deviation, for all the basins of 5th order have been calculated and presented in Tables 5.2.a, b, c, d, e, f, g, and h. From the calculated values as observed from Table 5.3 it can be said that for basins 1 to 8, 68 % of the area falls respectively under the categories of 241 m. to 134 m., 166 m. to 71 m., 190 m. to 124 m., 297 m. to 202 m., 267 m. to 156 m., 239 m. to 160 m., 171 m. to 120 m. and 145 m. to 56 m. in terms of relative relief there by indicating that all the basins of fifth order are included under the category of moderate to moderately high type.

In order to get the regional picture of all the basins of fifth order, frequency percentage of the relative relief have been categorised and are presented in Table 5.4. From this table, it is evident that all the basins except basin 4 fall under the category of moderate to moderately high relative relief.

Table 5.1 : Relative Relief frequency distribution of fifth order basins in the area

BASIN NOS.	VERY LOW 0-20m.	LOW 20-80m.	MODERATE 80 -140m.	MODERATELY HIGH 140-200m.	HIGH 200-260m.	VERY HIGH 260 m.AND ABOVE
1.	---	---	22.60	36.521	27.827	13.043
2.	2.80	6.30	44.77	46.17	---	---
3.	---	---	33.333	57.143	9.524	---
4.	---	---	---	10.526	52.631	36.843
5.	---	---	13.889	25.00	38.89	22.221
6.	---	---	9.302	39.535	46.512	4.651
7.	---	15.068	28.767	50.685	2.74	2.74
8.	3.03	36.36	39.4	19.39	1.82	---
AVG.	2.92	28.87	27.72	35.62	25.70	15.89

Frequency in percent.

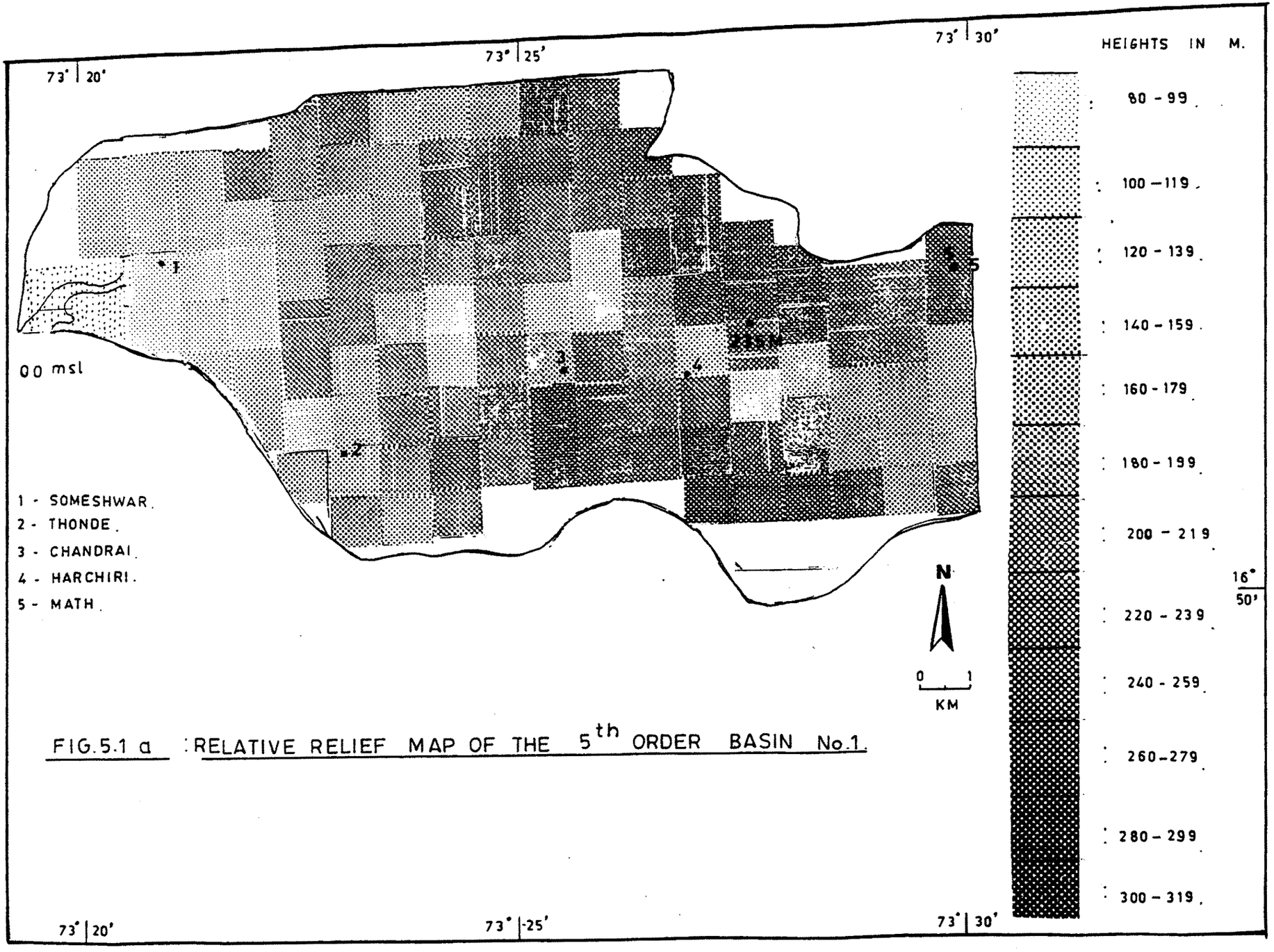

FIG.5.1 a : RELATIVE RELIEF MAP OF THE 5th ORDER BASIN No.1.

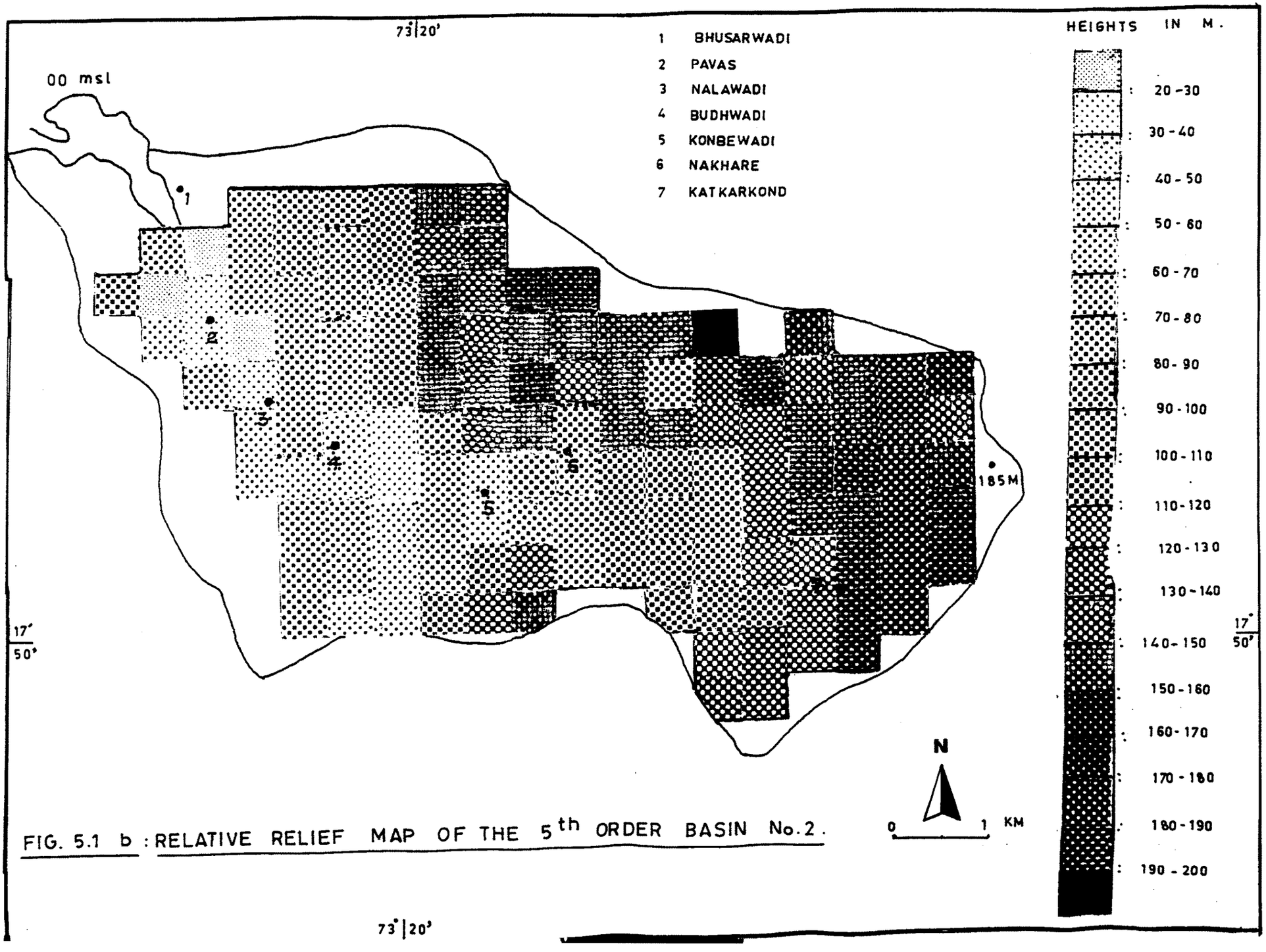

FIG. 5.1 b : RELATIVE RELIEF MAP OF THE 5th ORDER BASIN No.2.

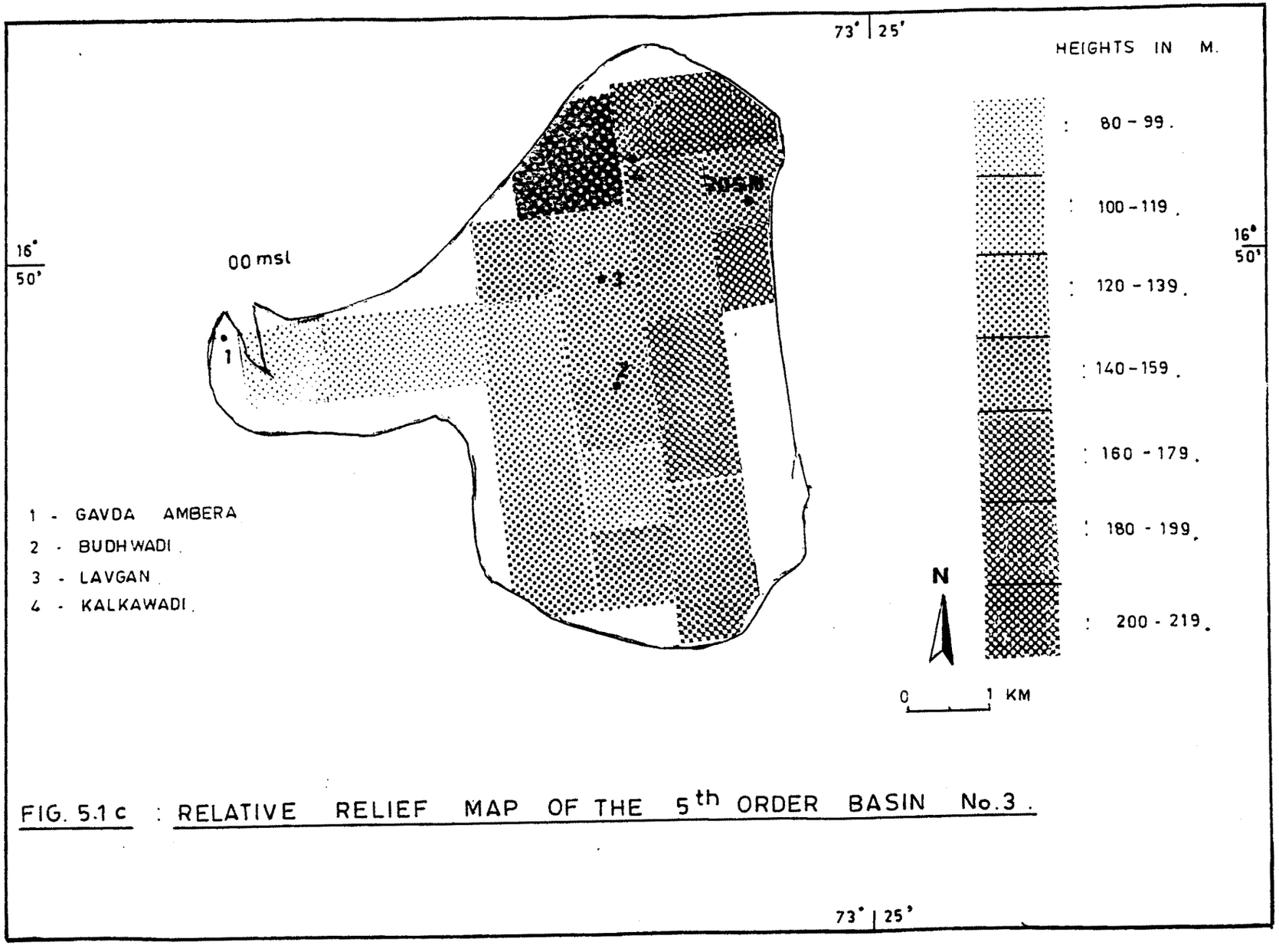

FIG. 5.1 c : RELATIVE RELIEF MAP OF THE 5th ORDER BASIN No.3.

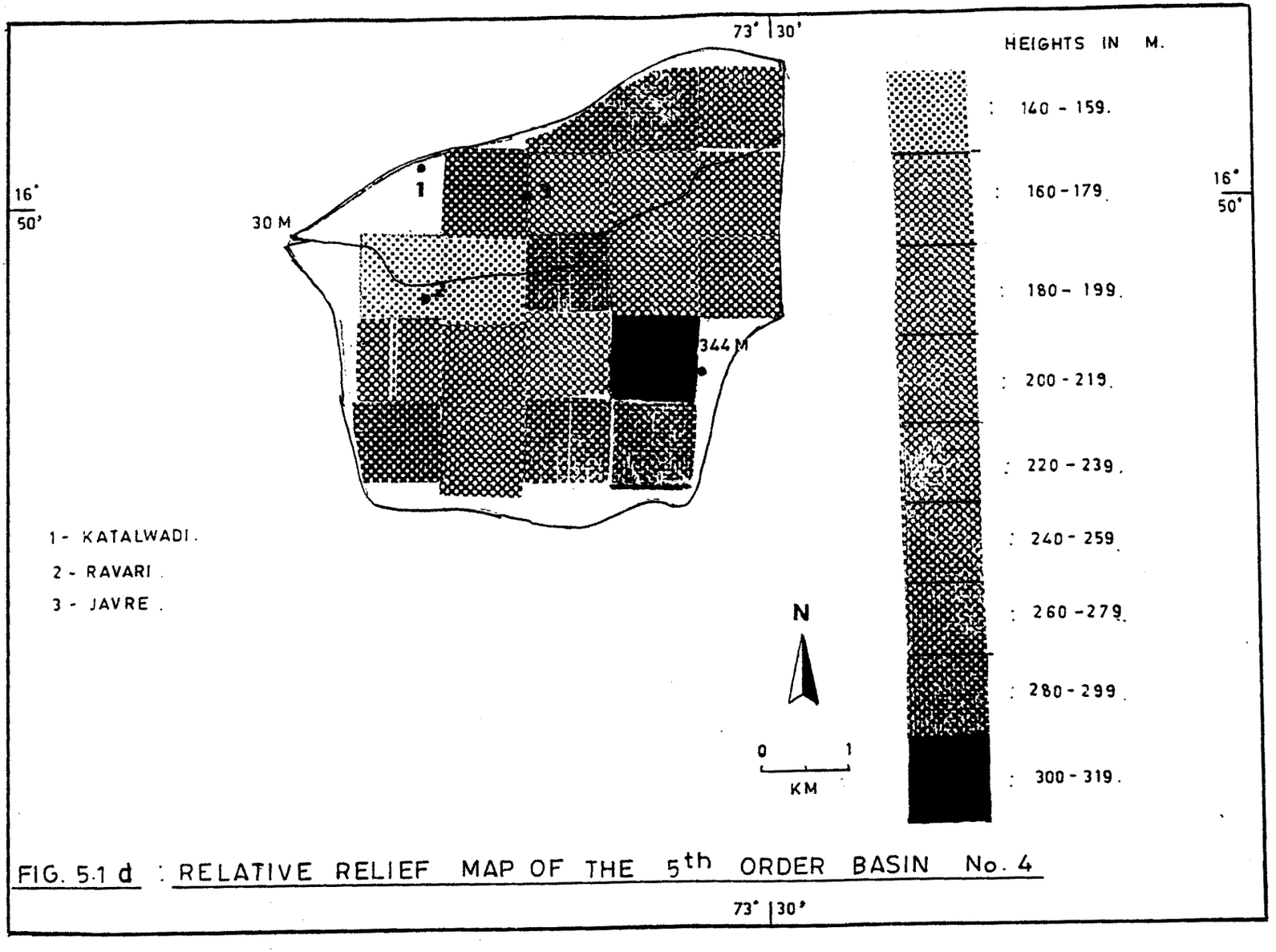

FIG. 5.1 d : RELATIVE RELIEF MAP OF THE 5th ORDER BASIN No. 4

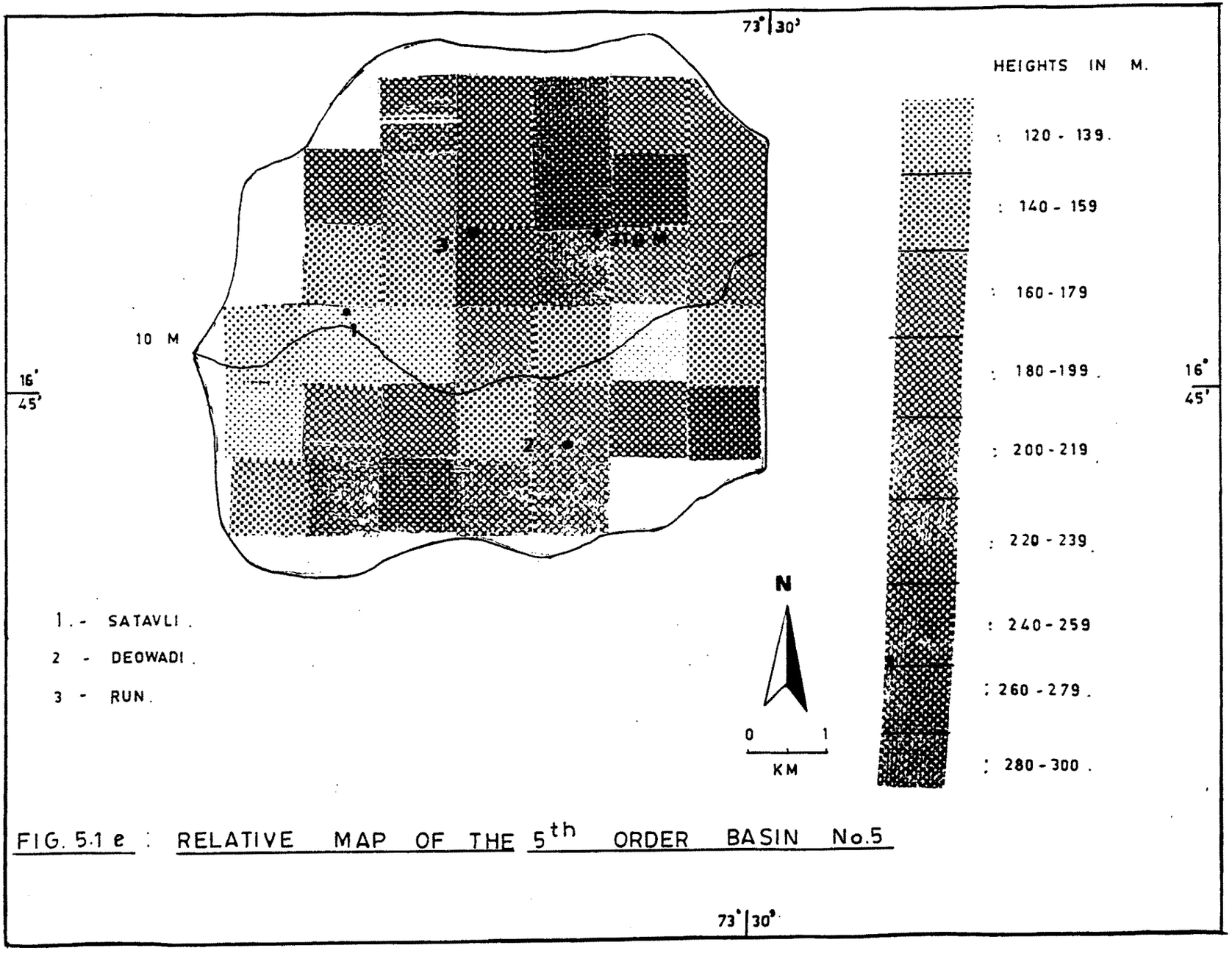

FIG. 5.1 e : RELATIVE MAP OF THE 5th ORDER BASIN No.5

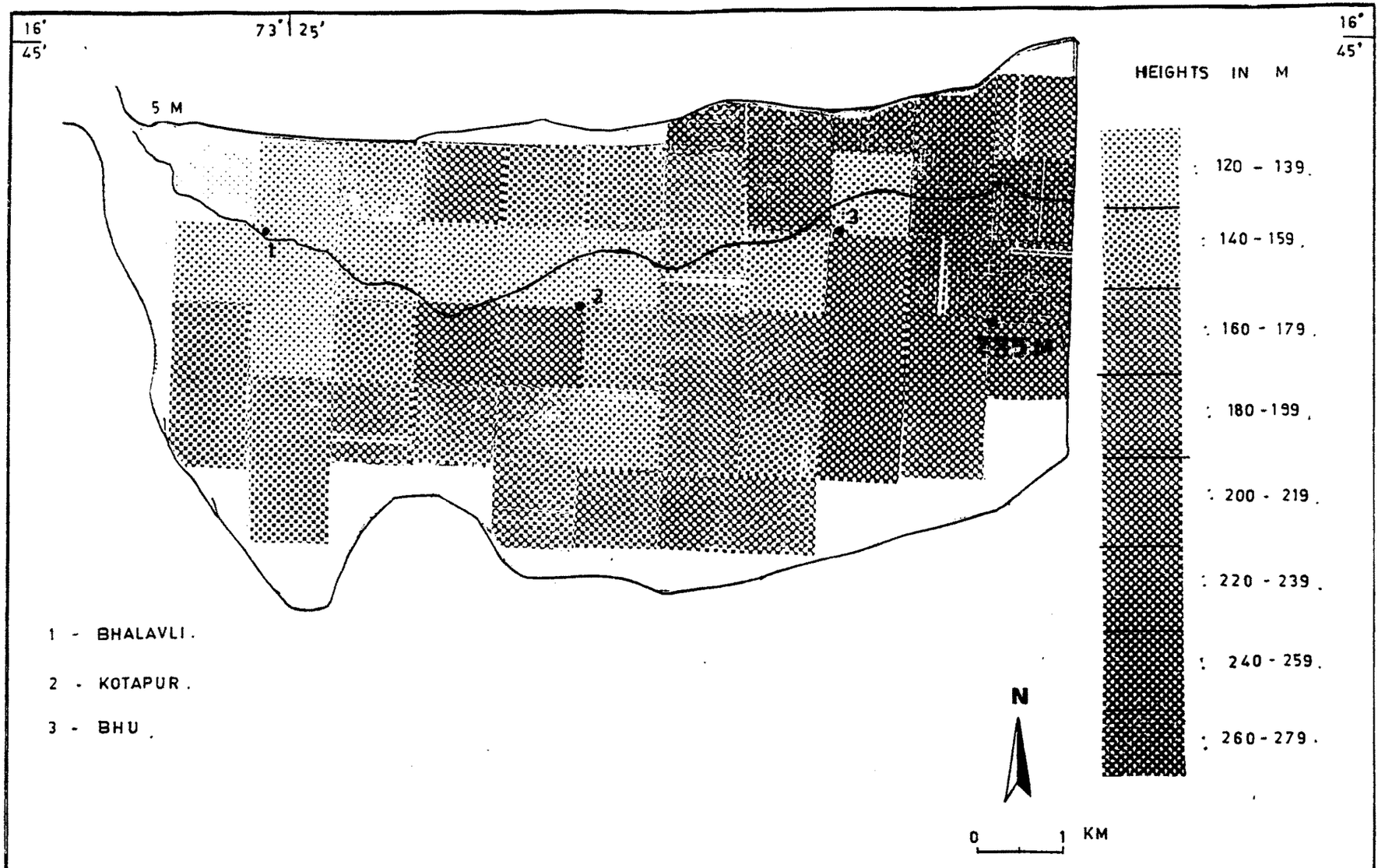

FIG. 5.1 f : RELATIVE RELIEF MAP OF THE 5th ORDER BASIN No.6.

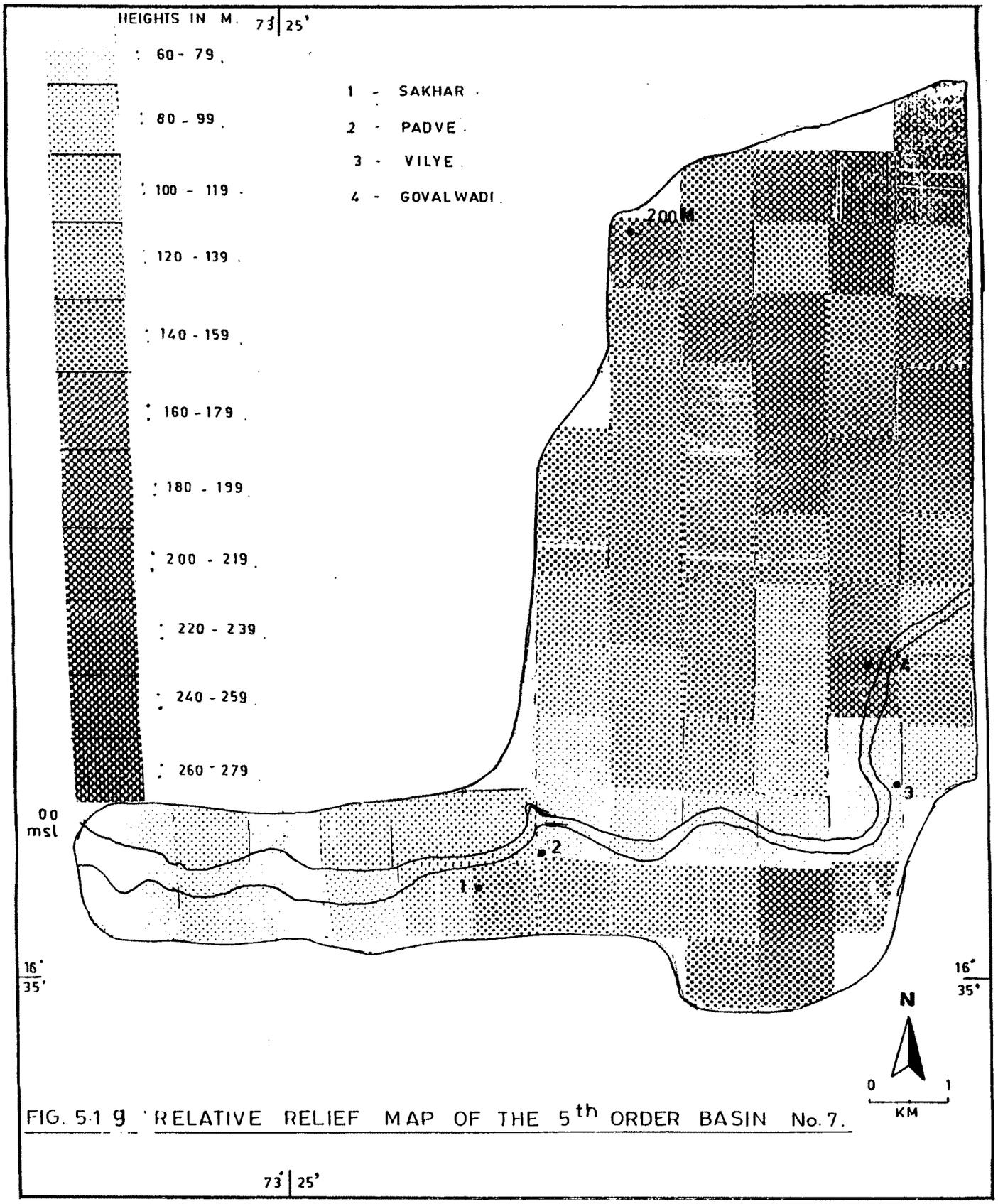

FIG. 5.1 9 RELATIVE RELIEF MAP OF THE 5th ORDER BASIN No. 7.

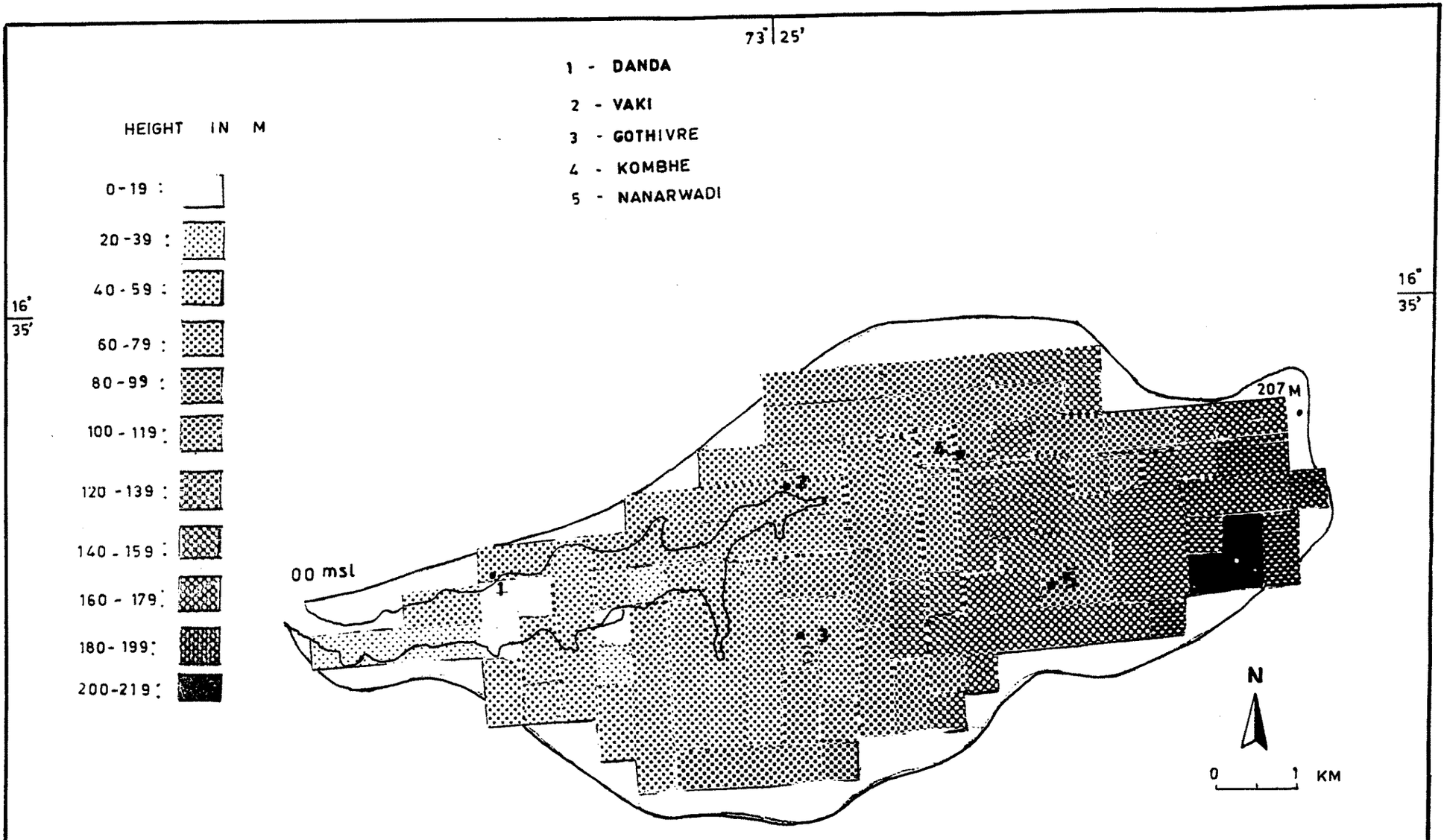

FIG. 5.1 h : RELATIVE RELIEF MAP OF OF THE 5th ORDER BASIN No. 8.

Table 5.2 a : Relative relief : Frequency distribution and spatial coverages of fifth order basin no.1
(one km^2 grid)

SR. NO.	CLASS IN M.	FREQ.	CUM FREQ.	% FREQ.	CUM %	AREA KM^2	% OF AREA	CUM %
1.	80-99	04	4	3.478	3.478	04	3.48	3.48
2.	100-119	08	12	6.957	10.435	08	6.96	10.44
3.	120-139	14	26	12.174	22.609	14	12.17	22.61
4.	140-159	13	39	11.304	33.903	13	11.30	33.90
5.	160-179	12	51	10.435	44.348	12	10.44	44.35
6.	180-199	17	68	14.783	59.130	17	14.78	59.13
7.	200-219	15	83	13.043	72.074	15	13.03	72.17
8.	220-239	12	95	10.435	82.609	12	10.44	89.61
9.	240-259	05	100	4.348	86.957	05	4.35	86.96
10.	260-279	09	109	7.826	94.782	09	7.83	94.79
11.	180-299	06	115	5.218	100.000	06	5.21	100.00

1. Mean = 187.41304m
2. Standard Deviation = 53.364984
3. Variance = 2847.8215
4. Variation = 0.2847453
5. Coefficient of variation = 28.474531

Table 5.2 b : Relative relief : Frequency distribution and spatial coverages of fifth order basin no.2
(one km^2 grid)

SR. NO.	CLASS IN M.	FREQ.	CUM FREQ.	% FREQ.	CUM %	AREA KM^2	% OF AREA	CUM %
1.	0 - 29	04	04	2.80	2.80	04	2.80	2.80
2.	30 - 49	01	05	0.70	3.50	01	0.70	3.50
3.	50 - 69	08	13	5.60	9.10	08	5.60	9.10
4.	70 - 89	30	43	20.98	30.08	30	20.98	30.08
5.	90 - 109	18	61	12.60	42.68	18	12.60	42.68
6.	110 - 129	16	77	11.19	53.87	16	11.19	53.87
7.	130 - 149	21	98	14.69	68.56	21	14.69	68.56
8.	150 - 169	33	131	23.08	91.64	33	23.08	91.64
9.	170 - 189	11	142	7.62	99.33	11	7.62	99.33
10.	190 - 209	01	143	0.70	100.00	01	0.70	100.00

1. Mean = 118.2447m
2. Standard Deviation = 47.667
3. Variance = 2271.1937
4. Variation = 0.4420
5. Coefficient of variation = 44.2074

Table 5.2 c : Relative relief : Frequency distribution and spatial coverages of fifth order basin no.3 (km^2 grid)

SR. NO.	CLASS IN M.	FREQ.	CUM FREQ.	% FREQ.	CUM %	AREA km^2	% OF AREA	CUM %
1.	80 - 99	1	1	4.762	4.762	1	4.762	4.762
2.	100 - 119	2	3	9.524	14.286	2	9.524	14.286
3.	120 - 139	4	7	19.048	33.333	4	19.048	33.333
4.	140 - 159	3	10	14.286	47.619	3	14.286	47.619
5.	160 - 179	5	15	23.810	71.429	5	23.810	71.429
6.	180 - 199	4	19	19.048	90.476	4	19.048	90.476
7.	200 - 219	2	21	9.524	100.000	2	9.524	100.000

1. Mean = 157.11905m
2. Standard Deviation = 32.936315
3. Variance = 1084.8009
4. Variation = 0.2096252
5. Coefficient of variation = 20.96252

Table 5.2 d : Relative relief : Frequency distribution and spatial coverages of fifth order basin no.4 (km^2 grid)

SR. NO.	CLASS IN M.	FREQ.	CUM FREQ.	% FREQ.	CUM %	AREA km^2	% OF AREA	CUM %
1.	140 - 159	1	1	5.263	5.263	1	5.263	5.263
2.	160 - 179	0	1	0.0	5.263	0	0.0	5.263
3.	180 - 199	1	2	5.263	10.526	1	5.263	10.526
4.	200 - 219	3	5	15.789	26.316	3	5.789	26.316
5.	220 - 239	3	8	15.789	42.105	3	5.789	42.105
6.	240 - 259	4	12	21.053	63.157	4	1.053	63.157
7.	260 - 279	3	15	15.789	78.946	3	5.789	78.946
8.	280 - 299	1	16	5.263	84.209	1	5.263	84.209
9.	300 - 319	1	17	5.263	89.472	1	5.263	89.472
10.	320 - 339	1	18	5.263	94.735	1	5.263	94.735
11.	340 - 359	1	19	5.263	99.999	1	5.263	99.999

1. Mean = 249.5 m
2. Standard Deviation = 47.239591
3. Variance = 2231.5789
4. Variation = 0.189337
5. Coefficient of variation = 18.9337

Table 5.2 e : Relative Relief : Frequency distribution and spatial coverages of fifth order basin no.5
(one km^2 grid)

SR. NO.	CLASS IN M.	FREQ.	CUM FREQ.	% FREQ.	CUM %	AREA KM^2	% OF AREA	CUM %
1.	120 - 139	5	5	13.889	13.889	5	13.889	13.889
2.	140 - 159	5	10	13.889	27.778	5	13.889	27.778
3.	160 - 179	1	11	2.778	30.556	1	2.778	30.556
4.	180 - 199	3	14	8.333	38.889	3	8.333	38.889
5.	200 - 219	6	20	16.667	55.556	6	16.667	55.556
6.	220 - 239	3	23	8.333	63.889	3	8.333	63.889
7.	240 - 259	5	28	13.889	77.779	5	13.889	77.779
8.	260 - 279	2	30	5.556	83.333	2	5.556	83.333
9.	280 - 299	4	34	11.111	94.444	4	11.111	94.444
10.	300 - 319	2	36	5.556	100.000	2	5.556	100.000

1. Mean = 212.280 m
2. Standard Deviation = 56.401886
3. Variance = 3181.1728
4. Variation = 0.2656957
5. Coefficient of variation = 26.56957

Table 5.2 f : Relative Relief : Frequency distribution and spatial coverages of fifth order basin no.6
(one km^2 grid)

SR. NO.	CLASS IN M.	FREQ.	CUM FREQ.	% FREQ.	CUM %	AREA KM^2	% OF AREA	CUM %
1.	120 - 139	4	4	9.302	9.302	4	9.302	9.302
2.	140 - 159	4	8	9.302	18.604	4	9.302	18.604
3.	160 - 179	5	13	11.628	30.232	5	11.628	30.232
4.	180 - 199	8	21	18.605	48.837	8	18.605	48.837
5.	200 - 219	7	28	16.280	65.116	7	16.280	65.116
6.	220 - 239	7	35	16.280	81.396	7	16.280	81.396
7.	240 - 259	6	41	13.953	95.349	6	13.953	95.349
8.	260 - 279	2	43	4.651	100.000	2	4.651	100.000

1. Mean = 199.73256m
2. Standard Deviation = 39.384118
3. Variance = 1551.1087
4. Variation = 0.9159097
5. Coefficient of variation = 91.59097

Table 5.2 g : Relative Relief : Frequency distribution and spatial coverages of fifth order basin no.7 (km^2 one km grid)

SR. NO.	CLASS IN M.	FREQ.	CUM FREQ.	% FREQ.	CUM %	AREA km^2	% OF AREA	CUM %
1.	60 - 79	11	11	15.068	15.068	11	15.068	15.068
2.	80 - 99	6	17	8.219	23.287	6	8.219	23.287
3.	100 - 119	3	20	4.110	27.397	3	4.110	27.397
4.	120 - 139	12	32	16.438	43.835	12	16.438	43.835
5.	140 - 159	12	44	16.438	60.273	12	16.438	60.273
6.	160 - 179	17	61	23.288	83.561	17	23.288	83.561
7.	180 - 199	8	69	10.959	94.520	8	10.959	94.520
8.	200 - 219	1	70	1.370	95.890	1	1.370	95.890
9.	220 - 239	1	71	1.370	97.260	1	1.370	97.260
10.	240 - 259	0	71	0.000	97.260	0	0.000	97.260
11.	260 - 279	3	73	2.740	100.000	3	2.740	100.000

1. Mean = 145.52055m
2. Standard Deviation = 25.133376
3. Variance = 631.68659
4. Variation = 0.1727142
5. Coefficient of variation = 17.27142

Table 5.2 h : Relative Relief : Frequency distribution and spatial coverages of fifth order basin no.8 (km^2 one km grid)

SR. NO.	CLASS IN M.	FREQ.	CUM FREQ.	% FREQ.	CUM %	AREA km^2	% OF AREA	CUM %
1.	00 - 19	5	5	3.03	3.03	5	3.03	3.03
2.	20 - 39	6	11	3.64	6.67	6	3.64	6.67
3.	40 - 59	17	28	10.30	16.97	17	10.30	16.97
4.	60 - 79	37	65	22.42	39.39	37	22.42	39.39
5.	80 - 99	19	84	11.51	50.90	19	11.51	50.90
6.	100 - 119	22	106	13.33	64.23	22	13.33	64.23
7.	120 - 139	24	130	14.56	78.79	24	14.56	78.79
8.	140 - 159	19	149	11.51	90.30	19	11.51	90.30
9.	160 - 179	8	157	4.85	95.15	8	4.85	95.15
10.	180 - 199	5	162	3.03	98.18	5	3.03	98.18
11.	200 - 219	3	165	1.82	100.00	3	1.82	100.00

1. Mean = 100.77m
2. Standard Deviation = 45.0341
3. Variance = 2028.0771
4. Variation = 0.4469
5. Coefficient of variation = 44.6900

Table 5.3 : Mean and Standard Deviation calculated from Relative Relief analysis of fifth order basins in the area.

Sr.No.	Basin Nos.	Mean (in m.)	Standard Deviation
1	1	187.41	53.36
2	2	118.24	47.67
3	3	157.12	32.94
4	4	249.28	47.24
5	5	212.28	56.40
6	6	199.73	39.38
7	7	145.52	25.13
8	8	100.77	45.03

Table 5.4. : Relative Relief : higher frequency percentages in the fifth order basins of the area.

Basin Nos.	Relative Relief -> Very Low	Low	Moderate	Moderately High	High	Very High
1			<------60%------>			
2			<------60%------>			
3			<--70%-->			
4					<--68%-->	
5			<-----64%------>			
6			<------50%------>			
7			<------79%------>			
8		<----75%---->				

On an average 65% of the total frequencies of relief of all the seven basins fall under the category of moderate to moderately high relative relief except basin 4, having 68% of the total frequency of the relative relief under the category of high to very high relative relief. Frequency polygons of these basins have been presented in Figs. 4.3 a, b, c, d, e, f, g, and h. From these figures, it is evident that all the seven basins reveal negative skewness which means that the maximum concentration of frequencies lies in moderate to moderately high relative relief categories. However, basin 4 shows the +ve skewness, suggesting that the maximum concentration of frequencies is in high to very high relative relief category.

Spatial pattern of average slope

The angular inclination of earth, deformities are found by various tectonic, depositional and erosional agencies of exhogenetic and endogenetic forces. In order to study the land-scape developed because of various dynamic geomorphological agencies resulting in forming the slopes of a particular area, the terrain analysis and the determination of the characteristics on the basis of the angular properties become necessary to know the genetic history of any geomorphic unit.

For the study of the spatial pattern of slope, an analysis of angle frequencies, the scheme of calculation of average slope angles through grids has been applied (Dubey,

1986). The data obtained in the form of slope angles have been categorised in five classes, namely; level (0^{o} -10^{o}), gentle (11^{o} -20^{o}), moderate (21^{o} -30^{o}), moderately steep (31^{o} - 40^{o}), and steep (41^{o} -50^{o}). The data obtained have been presented in the form of cumulative percent frequency curves, frequency polygons and frequency histograms (Figs. 4.5.a, b, c, d, e, f, g and h). The data is presented in Tables 5.5.a, b, c, d, e, f, g and h. The statistical parameters like mean, standard deviation, variance and coefficient of variation have been calculated. It is observed from Table 5.6 that for basins 1 to 8, 68% of the area respectively falls under 35^{o} to 14^{o}, 31^{o} to 10^{o}, 26^{o} to 10^{o}, 25^{o} to 6^{o}, 42^{o} to 23^{o}, 29^{o} to 15^{o}, 25^{o} to 8^{o}, and 26^{o} to 8^{o} in terms of average slope. These values suggest that all the eight basins fall under the category of gentle to moderate slope types.

From table 5.7 it can be seen that on an average 72% of the total frequencies of slope of all the eight basins fall under the category of gentle to moderate slopes. Frequency polygons and frequency histograms of these basins have also been drawn and presented in Figs. 4.6 a, b, c, d, e, f, g, and h. From these figures, it is evident that all the eight basins show -ve skewness of frequency polygons. It can be concluded that the gentle and moderate type slopes are present in the area under investigation.

Table 5.5 a : Average Slopes, Frequency distribution and spatial coverages of fifth order basin no.1
(one km^2 grid)

SR. NO.	CLASS IN DEG.	FREQ.	CUM FREQ.	% FREQ.	CUM %	AREA km^2	% OF AREA	CUM %
1.	00 - 05	1	1	0.870	0.870	1	0.870	0.870
2.	06 - 10	11	12	9.565	10.435	11	9.565	10.435
3.	11 - 15	13	25	11.304	21.74	13	11.304	21.74
4.	16 - 20	19	44	16.522	38.261	19	16.522	38.261
5.	21 - 25	21	65	18.261	56.522	21	18.261	56.522
6.	26 - 30	15	80	13.043	69.565	15	13.043	69.565
7.	31 - 35	15	95	13.043	82.608	15	13.043	82.608
8.	36 - 40	11	106	9.565	92.173	11	9.565	92.173
9.	41 - 45	7	113	6.087	98.260	7	6.087	98.260
10.	46 - 50	2	115	1.739	99.999	2	1.739	99.999

1. Mean = 24.473913 DEG.
2. Standard Deviation = 10.558471
3. Variance = 111.4813
4. Variation = 0.43141735
5. Coefficient of variation = 43.141735

Table 5.5 b : Average Slopes, Frequency distribution and spatial coverages of fifth order basin no.2
(one km^2 grid)

SR. NO.	CLASS IN DEG.	FREQ.	CUM FREQ.	% FREQ.	CUM %	AREA km^2	% OF AREA	CUM %
1.	00 - 05	13	13	9.091	9.091	13	9.091	9.091
2.	06 - 10	10	23	6.993	16.084	10	6.993	16.084
3.	11 - 15	33	56	23.077	39.161	33	23.077	39.161
4.	16 - 20	19	75	13.287	52.448	19	13.287	52.448
5.	21 - 25	24	99	16.783	69.231	24	16.783	69.231
6.	26 - 30	13	112	9.091	78.322	13	9.091	78.322
7.	31 - 35	22	134	15.385	93.706	22	15.385	93.706
8.	36 - 40	04	138	2.797	96.503	04	2.797	96.503
9.	41 - 45	04	142	2.797	99.300	04	2.797	99.300
10.	46 - 50	01	143	0.699	100.000	01	0.699	100.000

1. Mean = 20.2622 DEG.
2. Standard Deviation = 10.5997
3. Variance = 12.3549
4. Variation = 0.5231
5. Coefficient of variation = 52.3126

Table 5.5 c : Average Slopes, Frequency distribution and spatial coverages of fifth order basin no.3
(one km^2 grid)

SR. NO.	CLASS IN DEG.	FREQ.	CUM FREQ.	% FREQ.	CUM %	AREA KM^2	% OF AREA	CUM %
1.	06 - 10	2	2	9.524	9.524	2	9.524	9.524
2.	11 - 15	7	9	33.333	42.857	7	33.333	42.857
3.	16 - 20	7	16	33.333	76.190	7	33.333	76.190
4.	21 - 25	3	19	14.286	90.476	3	14.286	90.476
5.	26 - 30	0	19	0.000	90.476	0	0.000	90.476
6.	31 - 35	0	19	0.000	90.476	0	0.000	90.476
7.	36 - 40	2	21	9.524	100.000	2	9.524	100.000

1. Mean = 18.00 DEG.
2. Standard Deviation = 7.7151
3. Variance = 59.5238
4. Variation = 0.4286
5. Coefficient of variation = 42.8620

Table 5.5 d : Average Slopes, Frequency distribution and spatial coverages of fifth order basin no.4
(one km^2 grid)

SR. NO.	CLASS IN DEG.	FREQ.	CUM FREQ.	% FREQ.	CUM %	AREA KM^2	% OF AREA	CUM %
1.	06 - 10	2	2	10.526	10.526	2	10.526	10.526
2.	11 - 15	2	4	10.526	21.052	2	10.526	21.052
3.	16 - 20	4	8	21.052	42.105	4	21.052	42.105
4.	21 - 25	7	15	36.842	78.947	7	36.842	78.947
5.	26 - 30	1	16	5.264	84.210	1	5.264	84.210
6.	31 - 35	2	18	10.526	94.736	2	10.526	94.736
7.	36 - 40	0	18	0.000	94.736	0	0.000	94.736
8.	41 - 45	1	19	5.264	100.000	1	5.264	100.000

1. Mean = 15.285714 DEG.
2. Standard Deviation = 9.336435
3. Variance = 87.169363
4. Variation = 0.6106248
5. Coefficient of variation = 61.06248

Table 5.5 e : Average Slopes, Frequency distribution and spatial coverages of fifth order basin no.5 (km^2 one km grid)

SR. NO.	CLASS IN DEG.	FREQ.	CUM FREQ.	% FREQ.	CUM %	AREA km^2	% OF AREA	CUM %
1.	16 - 20	4	4	11.111	11.111	4	11.111	11.111
2.	21 - 25	6	10	16.667	27.778	6	16.667	27.778
3.	26 - 30	5	15	13.889	41.667	5	13.889	41.667
4.	31 - 35	9	24	25.000	66.667	9	25.000	66.667
5.	36 - 40	1	25	2.778	69.444	1	2.778	69.444
6.	41 - 45	7	32	19.444	88.889	7	19.444	88.889
7.	46 - 50	4	36	11.111	100.000	4	11.111	100.000

1. Mean = 32.72 DEG.
2. Standard Deviation = 9.33
3. Variance = 87.1064
4. Variation = 0.2852608
5. Coefficient of variation = 28.52

Table 5.5 f : Average Slopes, Frequency distribution and spatial coverages of fifth order basin no.6 (km^2 one km grid)

SR. NO.	CLASS IN DEG.	FREQ.	CUM FREQ.	% FREQ.	CUM %	AREA km^2	% OF AREA	CUM %
1.	11 - 15	9	9	20.930	20.930	9	20.930	20.930
2.	16 - 20	10	19	23.256	44.186	10	23.256	44.186
3.	21 - 25	10	29	23.256	67.442	10	23.256	67.442
4.	26 - 30	10	39	23.256	90.698	10	23.256	90.698
5.	31 - 35	3	42	6.977	97.765	3	6.977	97.765
6.	36 - 40	1	43	2.325	100.000	1	2.325	100.000

1. Mean = 21.95 DEG.
2. Standard Deviation = 6.6084996
3. Variance = 43.672267
4. Variation = 0.3010706
5. Coefficient of variation = 30.10

Table 5.5 g : Average Slopes, Frequency distribution and spatial coverages of fifth order basin no.7 (km^2 grid)

SR. NO.	CLASS IN DEG.	FREQ.	CUM FREQ.	% FREQ.	CUM %	AREA km^2	% OF AREA	CUM %
1.	00 - 5	6	6	8.219	8.219	6	8.219	8.219
2.	06 - 10	11	17	15.068	23.288	11	15.068	23.288
3.	11 - 15	24	41	32.877	56.164	24	32.877	56.164
4.	16 - 20	9	50	12.329	68.493	9	12.329	68.493
5.	21 - 25	13	63	17.808	86.301	13	17.808	86.301
6.	26 - 30	5	68	6.849	93.151	5	6.849	93.151
7.	31 - 35	2	70	2.740	95.890	2	2.740	95.890
8.	36 - 40	2	72	2.740	98.630	2	2.740	98.630
9.	41 - 45	1	73	1.370	100.000	1	1.370	100.000

1. Mean = 16.45 DEG.
2. Standard Deviation = 8.8104721
3. Variance = 77.624418
4. Variation = 0.535591
5. Coefficient of variation = 53.5591

Table 5.5 h : Average Slopes, Frequency distribution and spatial coverages of fifth order basin no.8 (km^2 grid)

SR. NO.	CLASS IN DEG.	FREQ.	CUM FREQ.	% FREQ.	CUM %	AREA km^2	% OF AREA	CUM %
1.	00 - 5	20	20	11.581	11.581	20	11.581	11.581
2.	06 - 10	17	37	9.827	21.407	17	9.827	21.407
3.	11 - 15	44	81	25.434	46.841	44	25.434	46.841
4.	16 - 20	20	101	11.581	58.421	20	11.581	58.421
5.	21 - 25	52	153	30.058	88.479	52	30.058	88.479
6.	26 - 30	5	158	2.890	91.369	5	2.890	91.369
7.	31 - 35	13	171	7.515	98.884	13	7.515	98.884
8.	36 - 40	2	173	1.156	100.000	2	1.156	100.000

1. Mean = 17.1040 DEG.
2. Standard Deviation = 8.6640
3. Variance = 75.0648
4. Variation = 0.5065
5. Coefficient of variation = 50.6548

Table 5.6 : Mean and Standard Deviation calculated from Slope analysis of fifth order basins in the area.

Sr.No.	Basin Nos.	Mean (in deg.)	Standard Deviation
1	1	24.47	10.60
2	2	20.26	10.60
3	3	18.00	7.72
4	4	15.29	9.34
5	5	32.72	9.33
6	6	21.95	6.61
7	7	16.45	8.81
8	8	17.10	8.66

Table 5.7. : Average Slope : higher frequency percentages in the fifth order basins of the area.

Basin Nos.	Avg. Slope -> Level	Gentle	Moderate	Moderately Steep	Steep
1		<------60%----->			
2		<------62%----->			
3		<------80%----->			
4		<------74%----->			
5			<--------70%-------->		
6		<------90%----->			
7		<------62%----->			
8		<------77%----->			

Topographic profile

In order to understand the geomorphic set up of the area under investigation, the representative sections along the coast have been drawn and presented in Fig.5.2.

For the purpose, the topographic sheets on a scale 1:50,000 have been used. The area from Bhatya Creek in the north and Purangad Creek in the south has been drawn. This section is about 50 km. in length consisting mainly of the erosional features, such as rocky-beach which has been observed at Kasop, Ranpur, Agargula, Phadkawadi, Khardewadi. Whereas, sea-cliffs are observed at Kurli, Kasop, Kharadewadi and Guravwadi. Apart from these erosional features, there are some pocket beaches present between Kurli and Kasop, Vengani at Pavas creek near Bhandhari, near Phadkawadi and at Guravwadi. In general, it is observed that, depositional features are insignificant as compared to the presence of erosional landforms. These features merge with the first planar surface of 30 m. which has been described earlier in Chapter II.

Another section along the coast has been drawn from Purangad in the north and Vijaydurg in the south, totalling to about 70 km. in length. From this section, it is noticed that the geomorphic features are confined to first planar surface of 30 m. It is characterised by the presence of the sediments, tidal flats, colluvial slopes, whereas, the second planar surface is indicated by the flat table-land

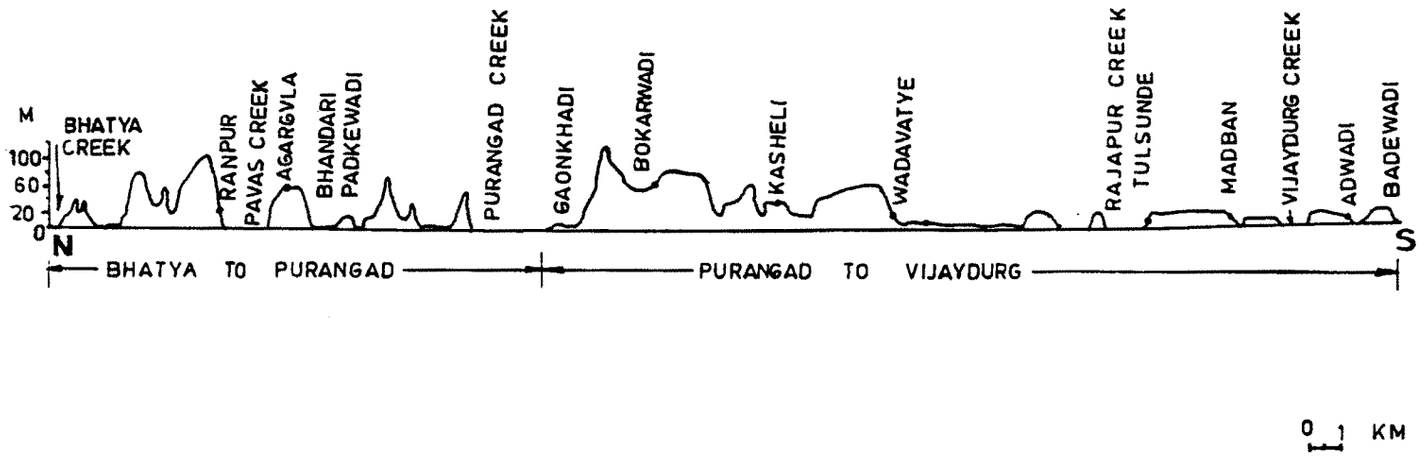

FIG. 5.2 : TOPOGRAPHIC PROFILE ALONG COAST; BHATYA CREEK TO VIJAYDURG CREEK.

topography, capped by the laterites. Such topography is observed at Nanarkewadi, Dasaibandh, Wadakombha, Wadavatye, Ambolgarh, Musakazi and Tulsunde villages. On comparison of these two sections, it is inferred that the section from Bhatya to Purangad consists mainly of erosional features and therefore, it is an area of submergence. The section from Purangad to Vijaydurg having the presence of depositional features is relatively an emerged one. In this area, mainly at Gaonkhadi and Danda, the raised beach sections have been observed along with mudflats which extend inland and merges with the colluvial slope along the stream banks. The geomorphic evolution in the coastal tract shows the imprints of relative subsidence towards the north of Purangad and relative upliftment towards the south of Purangad creek.

Analysis of geomorphic variables

The computer is used to assist man in business organization, research and in many other walks of life. In science, the advent of computers has meant that calculations which were previously beyond contemplation, because of the time span and drudgery involved in carrying out, have now become possible. More recently there has been an increasing use of computers for research and data analysis.

Three types of computer languages have been evolved viz; Machine code, Assembly code, and High level language.

Machine code is at the binary level, consists of patterns of binary digits. Both machine code and assembly codes are called low level language as opposed to the third which is a high level language.

The high level language such as BASIC, FORTRAN, COBOL, etc. are known as third generation language while higher levels, exist such as software packages and fourth generation languages (4GLS). A software package is simply a programme complete with user documentation, which explains how to use the programme. These days, use of database and spreadsheet packages such as dBASE III Plus, LOTUS 1-2-3, etc. are most common.

FORTRAN stands for FORmula TRANslation. This language is oldest high level language. It is most popular among the scientists and engineers and is used to solve scientific and engineering problems.

To study the morphometric parameters of the area investigated LOTUS 1-2-3 has been used. While working with this, no additional programming language is needed. This software has been developed and can be used by persons with no special knowledge about the computers and programming languages. LOTUS provides the user a menu driven approach. LOTUS is called a three-in-one package, since it performs three functions that of a spread sheet, a database management system and business graphics.

Data obtained from the morphometric analysis is in the form of rows and columns, that is, same as spread sheet in the LOTUS. Therefore, this package is used to calculate different morphometric parameters of the basins present within the area.

When the LOTUS software is loaded in the computer, it displays a menu on the screen. Once the problem solver selects a particular option from the menu, LOTUS displays further prompts on the screen asking the user to describe his problem more specifically. Thus by a series of prompts LOTUS elicits the required processing steps for solving the problems from the user and finally presents the solution in the desired format. Since LOTUS gives a worksheet on the computer screen, it is made up of a number of cells or locations arranged in rows and columns. Each cell seen on the screen in an addressable memory location of the computer, data has been put in each cell and referenced by the addresses of the different cells. LOTUS follows a convention of referencing the rows by the numbers 1, 2, 3 etc. and the columns by the alphabets A, B, C etc. The label or addresses of each cell is coined by combining the column letter and the row numbers e.g. first cell in the first column is A1, that of the first cell in the second column is B1 and so on.

In LOTUS when formula is entered in a cell, the formula does not it self get entered in the cell, it is only the computed values of the formula that is entered. By

considering this computing capability of LOTUS, different morphometric parameters obtained are entered in different cells e.g. total lengths of 1st order stream of 5th order basin no. 1 is 118.75 kms. This value is assigned to cell B2. In this way different data is entered in respective cells as shown in tables. According to the formulae of different parameters, expressions are entered in respective rows and columns. e.g. Form factor can be calculated by the formula A/BL. i.e. Area of basin/Basin length'. Values of area of basin is entered in cell L2 and basin length is entered in cell N2. The form factor (FF) is assigned to cell Y2 and in that cell expression +L2/N2 is entered. In this way all the values are entered in column L and basin length in column N is calculated as FF in column Y.

In this way, by using different expressions for respective formulae, morphometric parameters have been calculated and are presented in Table. 5.8.

Column	Description	Content
A	Sr. No.	1
B	L1	118.75
C	L2	52.63
D	L3	28
E	L4	21
F	L5	29
G	N1	174
H	N2	40
I	N3	10
J	N4	3
K	N5	1
L	A	130.38
M	SL	29
N	BL	29
O	BP	70.5
P	DC	4.5
Q	H	280
R	L	0
S	TOTAL L	@SUM(B2..F2)
T	TOTAL N	@SUM(G2..K2)
U	RD	+P2/2
V	AC	+U2*U2*2*22/7
W	ER	+P2/N2
X	CR	+L2/V2
Y	FF	+L2/N2
Z	Dd	+S2/L2
AA	SF	+T2/L2
AB	RD	+AA2/(Z2*Z2)
AC	BR	+J2/K2
AD	LR	+K2/L2
AE	CM	+L2/Z2
AF	TR	+K2/L2
AG	RR	+Q2/N2
AH	RN	(Q2-R2)/Z2

Note. : In Content Alphabet stands for the respective Column and the number follows by alphabet stands for respective Row number.

1	Sr. No.	:	Serial Number
2	L1	:	Length of Stream
3	L2	:	Length of Stream
4	L3	:	Length of Stream
5	L4	:	Length of Stream
6	L5	:	Length of Stream
7	N1	:	Number of Streams in the Basin
8	N2	:	Number of Streams in the Basin
9	N3	:	Number of Streams in the Basin
10	N4	:	Number of Streams in the Basin
11	N5	:	Number of Streams in the Basin
12	A	:	Area of the Basin
13	SL	:	Stream length (Length of Higher order Stream)
14	BL	:	Basin Length
15	BP	:	Basin Perimeter
16	DC	:	Diameter of Circle
17	TOTAL L	:	Sum of length of stream
18	TOTAL N	:	Sum of number of stream in basin
19	RD	:	Radius of Circle
20	AC	:	Area of Circle
21	ER	:	Elongation Ratio
22	CR	:	Circularity Ratio
23	FF	:	Form factor
24	Dd	:	Drainage Density
25	SF	:	Stream frequency
26	RD	:	Relative Density
27	BR	:	Bifurcation ratio
28	LR	:	Length Ratio
29	CM	:	Constant of channel maintainance
30	TR	:	Texture Ratio
31	RR	:	Relief ratio
32	DM	:	D

Morphometric Parameters of 6th order basin in the area between Bhatya Creek and Vijaydurg Creek. (TABLE - 5.8)

Sr. No.	L1	L2	L3	L4	L5	L6	N1	N2	N3
1	209.81	549.28	78.88	58.30	36.13	36.15	401.00	115.00	28.00

N4	N5	N6	A	SL	BL	BP	DC	TOTAL L	TOTAL N
10.00	4.00	1.00	290.46	36.50	22.50	86.25	15.00	968.55	559.00

RD	AC	ER	CR	FF	Dd	SF	RD	BR	LR
7.50	353.57	0.67	0.82	12.91	3.33	1.92	0.17	4.00	1.00

CM	TR
0.30	0.00

Morphometric Parameters of 5th order basin in the area between Bhatya Creek and Vijaydurg Creek.

Sr. No.	Sr. No.	L1	L2	L3	L4	L5	N1	N2	N3	N4
1	1	118.75	52.63	28.00	21.00	29.00	174.00	40.00	10.00	3.00
2	2	82.00	44.50	19.50	15.50	24.00	70.00	14.00	4.00	1.00
3	3	32.63	14.50	10.38	5.50	7.75	60.00	10.00	4.00	1.00
4	4	19.00	7.88	1.75	4.25	6.88	29.00	6.00	1.00	1.00
5	5	29.73	15.75	16.75	4.75	8.75	56.00	16.00	7.00	1.00
6	6	40.73	34.85	7.25	10.00	12.75	62.00	23.00	3.00	2.00
7	7	56.88	18.50	14.25	12.25	18.75	74.00	15.00	4.00	1.00
8	8	79.00	39.00	42.00	30.00	16.00	87.00	15.00	5.00	2.00

Sr. No.	N5	A	SL	BL	BP	DC	H	L	TOTAL L
1	1.00	130.38	29.00	29.00	70.50	4.50	280.00	0.00	249.38
2	1.00	169.60	24.00	11.50	52.00	5.00	180.00	0.00	185.50
3	1.00	30.38	7.75	7.00	18.25	3.00	200.00	0.00	70.76
4	1.00	25.13	6.88	6.00	17.00	3.50	344.00	35.00	39.76
5	1.00	66.38	8.75	7.50	20.00	6.00	300.00	0.00	75.73
6	1.00	48.44	12.75	12.00	28.50	5.00	240.00	0.00	105.58
7	1.00	56.04	18.75	7.00	40.00	2.50	260.00	0.00	120.63
8	1.00	47.49	16.00	14.00	35.28	4.50	200.00	0.00	206.00

Sr. No.	TOTAL N	RD	AC	ER	CR	FF	Dd	SF	RD
1	228.00	2.25	31.82	0.16	4.10	4.50	1.91	1.75	0.48
2	90.00	2.50	39.29	0.43	4.32	14.75	1.09	0.53	0.44
3	76.00	1.50	14.14	0.43	2.15	4.34	2.33	2.50	0.46
4	38.00	1.75	19.25	0.58	1.31	4.19	1.58	1.51	0.60
5	81.00	3.00	56.57	0.80	1.17	8.85	1.14	1.22	0.94
6	91.00	2.50	39.29	0.42	1.23	4.04	2.18	1.88	0.40
7	95.00	1.25	9.82	0.36	5.71	3.01	2.15	1.70	0.37
8	110.00	2.25	31.82	0.32	1.49	3.39	4.34	2.32	0.12

Sr. No.	BR	LR	CM	TR	RR	RN
1	3.00	0.01	68.16	0.01	9.66	146.39
2	1.00	0.01	155.06	0.01	15.65	164.57
3	1.00	0.03	13.04	0.03	28.57	85.85
4	1.00	0.04	15.88	0.04	57.33	195.26
5	1.00	0.02	58.18	0.02	40.00	262.96
6	2.00	0.02	22.22	0.02	20.00	110.11
7	1.00	0.02	26.03	0.02	37.14	120.78
8	2.00	0.02	10.95	0.02	14.29	46.10

Morphometric Parameters of 3rd order basin in the area between Bhatya Creek and Vijaydurg Creek.

Sr. No.	L1	L2	L3	N1	N2	N3	A	SL	BL
1	11.00	1.00	2.75	22.00	1.00	1.00	3.75	2.75	2.50
2	1.25	1.75	2.50	2.00	1.00	1.00	3.84	2.50	3.00
3	3.25	1.25	6.50	7.00	1.00	1.00	5.44	6.50	3.50
4	1.75	1.75	2.50	5.00	2.00	1.00	2.00	2.50	2.50
5	3.63	4.25	4.50	9.00	4.00	1.00	6.63	4.50	2.50
6	2.50	1.00	2.00	5.00	1.00	1.00	1.00	2.00	1.50
7	2.25	1.25	1.75	5.00	1.00	1.00	1.38	1.75	2.10
8	1.75	1.25	1.75	5.00	1.00	1.00	2.13	1.75	2.00
9	1.50	0.75	1.75	3.00	1.00	1.00	2.13	1.75	2.20
10	2.50	1.50	2.00	4.00	1.00	1.00	2.38	2.00	3.00
11	0.50	2.25	1.50	2.00	2.00	1.00	0.75	1.50	2.25
12	1.13	0.25	3.50	4.00	1.00	1.00	2.06	3.50	3.50
13	2.38	1.25	3.75	5.00	1.00	1.00	2.33	3.75	2.75
14	0.25	0.50	2.00	1.00	1.00	1.00	1.69	2.00	2.50
15	8.25	4.25	5.50	15.00	2.00	1.00	7.94	5.50	4.50
16	8.75	2.75	3.50	6.00	2.00	1.00	4.44	3.50	3.75
17	3.50	2.00	3.75	4.00	1.00	1.00	3.00	3.75	2.50
18	2.00	3.25	2.25	3.00	2.00	1.00	1.25	2.25	2.50
19	8.38	0.75	1.50	13.00	1.00	1.00	1.25	1.50	1.50
20	2.25	1.50	3.50	5.00	1.00	1.00	3.13	3.50	2.75
21	2.00	1.25	3.50	5.00	1.00	1.00	1.44	3.50	3.50
22	3.65	0.75	3.25	8.00	1.00	1.00	2.75	3.25	2.75
23	0.25	1.25	2.25	2.00	1.00	1.00	1.63	2.25	2.00
24	8.75	5.75	5.50	14.00	1.00	1.00	10.57	5.50	5.00
25	1.25	0.75	1.75	3.00	1.00	1.00	1.56	1.75	1.50

26	0.50	0.50	1.25	2.00	1.00	1.00	0.56	1.25	0.75
27	2.50	1.25	3.50	6.00	1.00	1.00	2.50	3.50	2.50
28	1.88	1.25	2.50	5.00	1.00	1.00	2.00	2.50	2.25
29	4.25	2.25	2.75	6.00	1.00	1.00	4.38	2.75	2.30
30	3.75	1.25	2.75	5.00	1.00	1.00	2.94	2.75	6.25
31	3.00	1.25	1.75	5.00	1.00	1.00	2.38	1.75	3.75
32	5.37	2.25	3.75	7.00	2.00	1.00	4.25	3.75	3.25
33	0.25	0.75	1.25	2.00	1.00	1.00	0.88	1.25	1.10
34	2.50	1.75	3.25	9.00	1.00	1.00	3.63	3.25	3.25
35	0.50	1.00	2.00	1.00	1.00	1.00	1.25	2.00	1.25
36	2.50	2.50	3.75	5.00	1.00	1.00	4.75	3.75	3.00
37	1.38	2.25	2.50	3.00	2.00	1.00	1.25	2.50	1.50
38	5.50	1.00	6.75	9.00	1.00	1.00	5.63	6.75	6.00
39	2.00	0.50	2.00	4.00	1.00	1.00	1.13	2.00	2.00
40	3.75	0.75	3.00	7.00	1.00	1.00	3.06	3.00	3.00
41	4.50	0.60	3.25	12.00	1.00	1.00	2.50	3.25	3.00
42	1.63	1.25	2.25	5.00	1.00	1.00	3.25	2.25	1.50
43	3.15	1.25	3.75	8.00	2.00	1.00	7.50	3.75	4.50
44	3.88	1.25	3.25	7.00	1.00	1.00	3.00	3.25	3.00
45	4.13	1.25	5.50	9.00	2.00	1.00	5.38	5.50	4.00
46	0.50	1.25	3.50	2.00	1.00	1.00	2.31	3.50	3.00
47	2.25	3.00	2.50	6.00	2.00	1.00	3.13	2.50	2.00
48	5.00	3.00	3.00	10.00	2.00	1.00	3.13	3.00	2.60
49	1.63	1.50	1.75	3.00	1.00	1.00	1.13	1.75	1.50
50	3.00	0.63	3.13	5.00	1.00	1.00	2.88	3.13	3.00
51	2.50	0.63	1.75	5.00	1.00	1.00	1.63	1.75	1.50
52	2.00	1.50	2.25	4.00	1.00	1.00	1.80	2.25	2.00
53	1.50	0.75	2.25	2.00	1.00	1.00	1.13	2.25	2.20
54	1.25	1.25	1.75	3.00	1.00	1.00	1.13	1.75	1.30

55	0.75	0.50	1.25	3.00	1.00	1.00	0.94	1.25	0.75
56	2.63	1.13	4.00	9.00	2.00	1.00	2.25	4.00	1.25
57	3.73	1.63	1.25	4.00	2.00	1.00	2.06	1.25	0.75
58	2.75	0.75	3.50	3.00	1.00	1.00	5.38	3.50	1.00
59	3.25	3.00	2.50	6.00	2.00	1.00	4.00	2.50	2.00
60	5.25	3.25	3.75	10.00	2.00	1.00	5.63	3.75	3.50
61	1.13	0.38	1.00	2.00	1.00	1.00	0.50	1.00	7.50
62	1.25	1.75	2.75	3.00	1.00	1.00	3.06	2.75	2.50
63	4.25	3.38	4.25	8.00	2.00	1.00	1.50	8.00	4.00
64	0.38	1.25	3.75	3.00	1.00	1.00	1.75	1.00	3.00
65	1.25	1.13	1.25	4.00	1.00	1.00	1.13	4.00	1.00
66	2.50	1.25	1.75	6.00	1.00	1.00	1.88	6.00	1.80
67	0.38	1.00	4.50	2.00	1.00	1.00	5.56	2.00	4.00
68	4.25	1.00	3.50	8.00	1.00	1.00	3.69	8.00	3.50
69	6.50	4.00	3.50	11.00	3.00	1.00	6.00	11.00	3.00
70	2.75	0.38	3.25	3.00	1.00	1.00	2.00	3.00	3.00
71	0.88	1.25	1.75	3.00	1.00	1.00	1.63	3.00	1.75
72	3.25	1.50	4.50	6.00	1.00	1.00	2.88	6.00	3.25
73	1.00	2.50	1.75	4.00	2.00	1.00	2.00	4.00	1.50
74	1.50	3.13	2.25	6.00	4.00	1.00	0.75	6.00	2.50
75	2.00	5.25	4.00	3.00	2.00	1.00	3.50	3.00	3.50
76	9.37	2.20	3.50	12.00	1.00	1.00	3.69	12.00	2.50
77	11.75	6.25	5.50	16.00	4.00	1.00	6.56	16.00	2.50
78	1.25	0.75	2.25	3.00	1.00	1.00	2.00	3.00	5.00

Sr. No.	BP	DC	TOTAL L	TOTAL N	RD	AC	ER	CR	FF
1	7.50	1.00	14.75	24.00	0.50	1.57	0.40	2.39	1.50
2	8.00	0.40	5.50	4.00	0.20	0.25	0.13	15.27	1.28
3	15.25	0.50	11.00	9.00	0.25	0.39	0.14	13.85	1.55
4	7.00	0.75	6.00	8.00	0.38	0.88	0.30	2.26	0.80
5	8.25	0.80	12.38	14.00	0.40	1.01	0.32	6.59	2.65
6	7.25	0.75	5.50	7.00	0.38	0.88	0.50	1.13	0.67
7	8.00	1.00	5.25	7.00	0.50	1.57	0.48	0.88	0.66
8	5.00	1.20	4.75	7.00	0.60	2.26	0.60	0.94	1.07
9	5.50	1.10	4.00	5.00	0.55	1.90	0.50	1.12	0.97
10	7.50	1.20	6.00	6.00	0.60	2.26	0.40	1.05	0.79
11	7.00	1.75	4.25	5.00	0.88	4.81	0.78	0.16	0.33
12	11.00	1.00	4.88	6.00	0.50	1.57	0.29	1.31	0.59
13	10.25	1.75	7.38	7.00	0.88	4.81	0.64	0.48	0.85
14	8.50	1.00	2.75	3.00	0.50	1.57	0.40	1.08	0.68
15	13.00	2.75	18.00	18.00	1.38	11.88	0.61	0.67	1.76
16	12.25	1.75	15.00	9.00	0.88	4.81	0.47	0.92	1.18
17	7.50	1.50	9.25	6.00	0.75	3.54	0.60	0.85	1.20
18	7.00	0.50	7.50	6.00	0.25	0.39	0.20	3.18	0.50
19	5.25	1.20	10.63	15.00	0.60	2.26	0.80	0.55	0.83
20	8.00	0.30	7.25	7.00	0.15	0.14	0.11	22.13	1.14
21	9.25	1.40	6.75	7.00	0.70	3.08	0.40	0.47	0.41
22	7.00	1.00	7.65	10.00	0.50	1.57	0.36	1.75	1.00
23	6.50	1.00	3.75	4.00	0.50	1.57	0.50	1.04	0.82
24	19.25	2.75	20.00	16.00	1.38	11.88	0.55	0.89	2.11
25	5.00	1.00	3.75	5.00	0.50	1.57	0.67	0.99	1.04
26	4.25	0.50	2.25	4.00	0.25	0.39	0.67	1.43	0.75

27	8.00	0.75	7.25	8.00	0.38	0.88	0.30	2.83	1.00
28	8.00	0.80	5.63	7.00	0.40	1.01	0.36	1.99	0.89
29	8.50	1.00	9.25	8.00	0.50	1.57	0.43	2.79	1.90
30	18.00	2.00	7.75	7.00	1.00	6.29	0.32	0.47	0.47
31	8.25	1.00	6.00	7.00	0.50	1.57	0.27	1.51	0.63
32	11.00	1.25	11.37	10.00	0.63	2.46	0.38	1.73	1.31
33	4.00	1.00	2.25	4.00	0.50	1.57	0.91	0.56	0.80
34	7.75	1.50	7.50	11.00	0.75	3.54	0.46	1.03	1.12
35	5.00	1.25	3.50	3.00	0.63	2.46	1.00	0.51	1.00
36	8.25	1.00	8.75	7.00	0.50	1.57	0.33	3.02	1.58
37	4.00	1.10	6.13	6.00	0.55	1.90	0.73	0.66	0.83
38	15.00	1.00	13.25	11.00	0.50	1.57	0.17	3.58	0.94
39	9.00	0.75	4.50	6.00	0.38	0.88	0.38	1.28	0.57
40	8.25	1.50	7.50	9.00	0.75	3.54	0.50	0.87	1.02
41	9.25	1.10	8.35	14.00	0.55	1.90	0.37	1.31	0.83
42	6.00	1.25	5.13	7.00	0.63	2.46	0.83	1.32	2.17
43	11.00	1.25	8.15	11.00	0.63	2.46	0.28	3.05	1.67
44	7.00	1.50	8.38	9.00	0.75	3.54	0.50	0.85	1.00
45	10.25	1.25	10.88	12.00	0.63	2.46	0.31	2.19	1.35
46	7.25	0.50	5.25	4.00	0.25	0.39	0.17	5.88	0.77
47	5.00	1.50	7.75	9.00	0.75	3.54	0.75	0.89	1.57
48	7.25	1.25	11.00	13.00	0.63	2.46	0.48	1.27	1.20
49	4.00	0.75	4.88	5.00	0.38	0.88	0.50	1.28	0.75
50	8.50	1.00	6.75	7.00	0.50	1.57	0.33	1.83	0.96
51	5.00	0.50	4.88	7.00	0.25	0.39	0.33	4.15	1.09
52	6.50	1.00	5.75	6.00	0.50	1.57	0.50	1.15	0.90
53	5.75	0.75	4.50	4.00	0.38	0.88	0.34	1.28	0.51
54	4.00	0.60	4.25	5.00	0.30	0.57	0.46	2.00	0.87
55	3.00	0.30	2.50	5.00	0.15	0.14	0.40	6.63	1.25

56	3.00	0.75	7.75	12.00	0.38	0.88	0.60	2.55	1.80
57	3.00	0.20	6.60	7.00	0.10	0.06	0.27	32.82	2.75
58	4.25	0.30	7.00	5.00	0.15	0.14	0.30	38.04	5.38
59	5.00	1.50	8.75	9.00	0.75	3.54	0.75	1.13	2.00
60	9.25	1.50	12.25	13.00	0.75	3.54	0.43	1.59	1.61
61	3.00	0.50	2.50	4.00	0.25	0.39	0.07	1.27	0.07
62	7.25	1.00	5.75	5.00	0.50	1.57	0.40	1.95	1.23
63	13.25	1.25	11.88	11.00	0.63	2.46	0.31	0.61	0.38
64	7.00	0.75	5.38	3.00	0.38	0.88	0.25	1.98	0.58
65	4.50	0.80	3.63	6.00	0.40	1.01	0.80	1.12	1.13
66	5.50	1.00	5.50	8.00	0.50	1.57	0.56	1.20	1.04
67	12.00	1.00	5.88	4.00	0.50	1.57	0.25	3.54	1.39
68	8.25	1.00	8.75	10.00	0.50	1.57	0.29	2.35	1.05
69	9.00	2.00	14.00	15.00	1.00	6.29	0.67	0.95	2.00
70	9.00	0.50	6.38	5.00	0.25	0.39	0.17	5.09	0.67
71	5.50	0.70	3.88	5.00	0.35	0.77	0.40	2.12	0.93
72	8.50	1.00	9.25	8.00	0.50	1.57	0.31	1.83	0.89
73	7.25	1.70	5.25	7.00	0.85	4.54	1.13	0.44	1.33
74	9.25	1.00	6.88	11.00	0.50	1.57	0.40	0.48	0.30
75	9.00	1.00	11.25	6.00	0.50	1.57	0.29	2.23	1.00
76	7.00	1.50	15.07	14.00	0.75	3.54	0.60	1.04	1.48
77	7.50	1.20	23.50	21.00	0.60	2.26	0.48	2.90	2.62
78	17.50	2.00	4.25	5.00	1.00	6.29	0.40	0.32	0.40

Sr. No.	Dd	SF	RD	ER	LR	CM	TR
1	3.93	6.40	0.41	0.36	1.00	0.25	0.27
2	1.43	1.04	0.51	0.70	1.00	0.70	0.26
3	2.02	1.65	0.40	0.19	1.00	0.49	0.18
4	3.00	4.00	0.44	0.70	2.00	0.33	0.50
5	1.87	2.11	0.61	0.94	4.00	0.54	0.15
6	5.50	7.00	0.23	0.50	1.00	0.18	1.00
7	3.80	5.07	0.35	0.71	1.00	0.26	0.72
8	2.23	3.29	0.66	0.71	1.00	0.45	0.47
9	1.88	2.35	0.67	0.43	1.00	0.53	0.47
10	2.52	2.52	0.40	0.75	1.00	0.40	0.42
11	5.67	6.67	0.21	1.50	2.00	0.18	1.33
12	2.37	2.91	0.52	0.07	1.00	0.42	0.49
13	3.17	3.00	0.30	0.33	1.00	0.32	0.43
14	1.63	1.78	0.67	0.25	1.00	0.61	0.59
15	2.27	2.27	0.44	0.77	2.00	0.44	0.13
16	3.38	2.03	0.18	0.79	2.00	0.30	0.23
17	3.08	2.00	0.21	0.53	1.00	0.32	0.33
18	6.00	4.80	0.13	1.44	2.00	0.17	0.80
19	8.50	12.00	0.17	0.50	1.00	0.12	0.80
20	2.32	2.24	0.42	0.43	1.00	0.43	0.32
21	4.69	4.86	0.22	0.36	1.00	0.21	0.69
22	2.78	3.64	0.47	0.23	1.00	0.36	0.36
23	2.30	2.45	0.46	0.56	1.00	0.43	0.61
24	1.89	1.51	0.42	1.05	1.00	0.53	0.09
25	2.40	3.21	0.55	0.43	1.00	0.42	0.64
26	4.00	7.10	0.44	0.40	1.00	0.25	1.78

27	2.90	3.20	0.38	0.36	1.00	0.34	0.40
28	2.81	3.50	0.44	0.50	1.00	0.36	0.50
29	2.11	1.83	0.41	0.82	1.00	0.47	0.23
30	2.64	2.38	0.34	0.45	1.00	0.38	0.34
31	2.52	2.94	0.46	0.71	1.00	0.40	0.42
32	2.68	2.35	0.33	0.60	2.00	0.37	0.24
33	2.56	4.55	0.70	0.60	1.00	0.39	1.14
34	2.07	3.03	0.71	0.54	1.00	0.48	0.28
35	2.80	2.40	0.31	0.50	1.00	0.36	0.80
36	1.84	1.47	0.43	0.67	1.00	0.54	0.21
37	4.90	4.80	0.20	0.90	2.00	0.20	0.80
38	2.35	1.95	0.35	0.15	1.00	0.42	0.18
39	3.98	5.31	0.33	0.25	1.00	0.25	0.88
40	2.45	2.94	0.49	0.25	1.00	0.41	0.33
41	3.34	5.60	0.50	0.18	1.00	0.30	0.40
42	1.58	2.15	0.87	0.56	1.00	0.63	0.31
43	1.09	1.47	1.24	0.33	2.00	0.92	0.13
44	2.79	3.00	0.38	0.38	1.00	0.36	0.33
45	2.02	2.23	0.55	0.23	2.00	0.49	0.19
46	2.27	1.73	0.34	0.36	1.00	0.44	0.43
47	2.48	2.88	0.47	1.20	2.00	0.40	0.32
48	3.51	4.15	0.34	1.00	2.00	0.28	0.32
49	4.31	4.42	0.24	0.86	1.00	0.23	0.88
50	2.34	2.43	0.44	0.20	1.00	0.43	0.35
51	2.99	4.29	0.48	0.36	1.00	0.33	0.61
52	3.19	3.33	0.33	0.67	1.00	0.31	0.56
53	3.98	3.54	0.22	0.33	1.00	0.25	0.88
54	3.76	4.42	0.31	0.71	1.00	0.27	0.88
55	2.67	5.33	0.75	0.40	1.00	0.38	1.07

56	3.44	5.33	0.45	0.28	2.00	0.29	0.44
57	3.20	3.39	0.33	1.30	2.00	0.31	0.48
58	1.30	0.93	0.55	0.21	1.00	0.77	0.19
59	2.19	2.25	0.47	1.20	2.00	0.46	0.25
60	2.18	2.31	0.49	0.87	2.00	0.46	0.18
61	5.00	8.00	0.32	0.38	1.00	0.20	2.00
62	1.88	1.63	0.46	0.64	1.00	0.53	0.33
63	7.92	7.33	0.12	0.79	2.00	0.13	0.67
64	3.07	1.71	0.18	0.33	1.00	0.33	0.57
65	3.22	5.33	0.51	0.90	1.00	0.31	0.89
66	2.93	4.26	0.50	0.73	1.00	0.34	0.53
67	1.06	0.72	0.64	0.22	1.00	0.95	0.18
68	2.37	2.71	0.48	0.29	1.00	0.42	0.27
69	2.33	2.50	0.46	1.14	3.00	0.43	0.17
70	3.19	2.50	0.25	0.12	1.00	0.31	0.50
71	2.38	3.07	0.54	0.71	1.00	0.42	0.61
72	3.21	2.78	0.27	0.33	1.00	0.31	0.35
73	2.63	3.50	0.51	1.43	2.00	0.38	0.50
74	9.17	14.67	0.17	1.39	4.00	0.11	1.33
75	3.21	1.71	0.17	1.31	2.00	0.31	0.29
76	4.08	3.79	0.23	0.63	1.00	0.24	0.27
77	3.58	3.20	0.25	1.14	4.00	0.28	0.15
78	2.13	2.50	0.55	0.33	1.00	0.47	0.50

Morphometric Parameters of 2nd order basin in the area between Bhatya Creek and Vijaydurg Creek.

Sr. No.	L1	L2	N1	N2	A	SL	BL	BP	DC
1	5.00	3.25	10.00	1.00	7.00	3.25	3.00	7.00	1.15
2	2.25	1.00	5.00	1.00	0.19	1.00	0.75	3.00	0.30
3	2.50	2.25	4.00	1.00	2.13	2.25	2.20	5.25	0.40
4	1.25	2.25	1.00	1.00	0.44	2.25	1.20	3.00	0.20
5	1.00	1.75	1.00	1.00	0.26	1.75	1.10	3.00	0.30
6	0.25	0.50	1.00	1.00	0.31	0.50	1.30	7.00	0.20
7	1.25	1.75	2.00	1.00	1.25	1.75	0.75	7.25	0.30
8	3.25	1.25	7.00	1.00	2.00	1.25	0.80	4.00	0.30
9	0.75	1.38	1.00	1.00	0.19	1.38	0.90	4.00	0.40
10	0.25	1.50	1.00	1.00	0.44	1.50	1.00	3.00	0.30
11	1.25	2.25	2.00	1.00	1.13	2.25	1.10	3.00	0.20
12	0.25	1.75	1.00	1.00	0.89	1.75	0.45	2.00	0.40
13	0.25	0.50	1.00	1.00	0.19	0.50	1.25	3.50	0.40
14	0.50	1.75	1.00	1.00	0.88	1.75	1.20	4.50	0.30
15	0.50	1.00	1.00	1.00	0.31	1.00	0.80	4.50	0.30
16	0.25	0.50	1.00	1.00	1.06	0.50	0.90	4.25	0.30
17	0.75	1.25	1.00	1.00	0.44	1.25	1.20	3.00	0.50
18	2.00	2.00	4.00	1.00	0.88	2.00	1.30	3.25	0.40
19	0.50	1.25	2.00	1.00	0.38	1.25	0.60	2.50	0.20
20	0.50	0.75	1.00	1.00	0.44	0.75	0.50	2.00	0.40
21	0.25	1.00	1.00	1.00	0.56	1.00	0.60	2.25	0.30
22	0.25	0.75	1.00	1.00	0.56	0.75	1.50	3.50	0.50
23	1.50	1.75	3.00	1.00	0.56	1.75	0.75	3.25	0.20
24	1.25	0.25	1.00	1.00	0.19	0.25	1.10	3.00	0.40
25	0.25	1.25	1.00	1.00	0.38	1.25	1.00	4.00	0.30

26	0.25	1.00	1.00	1.00	0.31	1.00	0.75	3.50	0.40
27	0.25	1.00	1.00	1.00	0.25	1.00	1.10	5.00	0.20
28	1.75	1.25	4.00	1.00	0.32	1.25	1.20	5.00	0.70
29	0.50	1.00	1.00	1.00	0.50	1.00	1.50	5.50	0.80
30	1.00	1.75	2.00	1.00	0.69	1.75	0.25	3.50	0.20
31	1.25	2.25	2.00	1.00	0.19	2.25	0.75	3.00	0.30
32	0.13	0.50	1.00	1.00	0.69	0.50	1.20	4.00	0.60
33	0.75	1.25	1.00	1.00	0.69	1.25	0.70	4.00	0.30
34	1.00	1.25	3.00	1.00	0.63	1.25	0.90	3.50	0.40
35	0.50	0.75	1.00	1.00	0.88	0.75	0.90	3.75	0.70
36	1.50	1.50	3.00	1.00	1.81	1.50	1.10	5.50	0.30
37	1.50	2.00	2.00	1.00	1.44	2.00	0.75	3.75	0.20
38	1.25	1.75	2.00	1.00	0.63	1.75	2.30	7.50	0.90
39	0.25	0.75	1.00	1.00	0.38	0.75	1.80	6.50	0.50
40	2.00	4.25	4.00	1.00	3.31	4.25	2.50	7.00	0.75
41	0.25	1.50	1.00	1.00	0.88	1.50	0.75	3.00	0.50
42	0.25	0.75	1.00	1.00	0.25	0.75	1.00	4.50	0.75
43	0.25	1.50	1.00	1.00	0.38	1.50	0.30	6.50	0.40
44	1.25	0.25	1.00	1.00	0.19	0.25	0.30	7.00	0.40
45	1.00	2.75	3.00	1.00	1.56	2.75	2.50	6.50	1.50
46	0.38	1.25	1.00	1.00	0.69	1.25	1.50	6.00	0.60
47	1.50	1.25	2.00	1.00	0.75	1.25	1.60	8.50	0.75
48	0.50	1.25	1.00	1.00	0.88	1.25	1.50	8.00	0.75
49	1.75	1.75	3.00	1.00	1.25	1.75	0.75	7.00	0.20
50	0.25	0.50	1.00	1.00	0.13	0.50	0.75	7.25	0.20
51	0.25	1.75	1.00	1.00	0.75	1.75	1.50	8.00	0.50
52	1.50	2.50	3.00	1.00	1.50	2.50	3.00	7.00	0.75
53	2.00	1.75	3.00	1.00	0.44	1.75	1.60	7.75	0.60
54	1.25	2.50	3.00	1.00	1.88	2.50	2.00	8.50	0.75

55	0.75	1.25	1.00	1.00	0.29	1.25	1.10	7.75	0.50
56	0.75	1.50	2.00	1.00	0.50	1.50	1.50	7.00	0.60
57	1.50	2.00	2.00	1.00	1.13	2.00	1.75	6.00	0.50
58	0.50	0.75	1.00	1.00	0.19	0.75	0.75	5.00	0.30
59	1.50	2.50	2.00	1.00	0.94	2.50	1.75	7.50	0.75
60	0.13	0.75	1.00	1.00	0.38	0.75	0.80	3.00	0.50
61	0.25	2.50	1.00	1.00	1.56	2.50	2.25	7.75	1.00
62	0.75	1.50	2.00	1.00	0.69	1.50	1.25	6.50	0.30
63	0.50	1.25	1.00	1.00	0.56	1.25	1.00	5.00	0.75
64	0.38	0.75	1.00	1.00	0.19	0.75	0.70	4.50	0.40
65	0.13	1.50	1.00	1.00	0.43	1.50	1.00	4.00	0.40
66	0.25	2.50	1.00	1.00	1.80	2.50	2.50	8.00	0.70
67	1.25	3.50	2.00	1.00	2.06	3.50	2.50	7.50	1.00
68	1.00	2.25	2.00	1.00	0.75	2.25	1.75	5.50	0.75
69	1.25	2.25	2.00	1.00	1.38	2.25	2.00	7.00	0.60
70	0.25	0.75	1.00	1.00	0.30	0.75	2.00	6.50	0.60
71	0.25	0.75	1.00	1.00	0.19	0.75	0.75	3.00	0.30
72	0.13	2.75	1.00	1.00	1.13	2.75	0.75	3.25	0.50
73	0.25	0.50	1.00	1.00	0.38	0.50	2.50	4.00	0.75
74	1.75	2.25	1.00	1.00	0.38	2.25	1.00	3.00	0.30
75	0.75	1.50	1.00	1.00	1.13	1.50	1.00	3.25	0.50
76	4.75	4.50	5.00	1.00	2.99	4.50	1.50	5.25	0.75
77	1.00	1.25	2.00	1.00	0.50	1.25	3.00	7.00	1.50
78	0.50	1.63	1.00	1.00	0.63	1.63	0.80	6.00	0.50
79	0.25	1.50	1.00	1.00	0.56	1.50	1.50	4.50	0.50
80	0.13	1.25	1.00	1.00	0.56	1.25	1.50	5.50	0.60
81	2.50	2.25	3.00	1.00	2.00	2.25	1.25	5.00	0.75
82	1.75	1.25	2.00	1.00	0.36	1.25	1.50	5.75	0.50
83	2.50	2.75	4.00	1.00	3.25	2.75	1.75	6.00	0.75

84	0.50	1.25	1.00	1.00	0.56	1.25	3.00	8.00	1.75
85	0.50	1.25	1.00	1.00	0.63	1.25	1.00	5.00	0.30
86	1.25	3.00	1.00	1.00	3.69	3.00	1.20	5.50	0.40
87	1.25	1.25	2.00	1.00	0.81	1.25	3.00	6.75	1.75
88	1.75	2.00	4.00	1.00	0.88	2.00	2.00	6.00	0.75
89	0.50	1.50	2.00	1.00	0.38	1.50	0.75	3.00	0.50
90	1.25	1.25	2.00	1.00	0.88	1.25	1.25	4.50	0.60
91	1.25	1.75	1.00	1.00	1.00	1.75	1.50	4.25	0.50
92	0.13	1.50	1.00	1.00	0.38	1.50	1.75	4.50	0.40
93	0.70	0.75	2.00	1.00	0.25	0.75	1.25	5.00	0.30
94	0.25	0.75	2.00	1.00	0.19	0.75	0.75	2.50	0.20
95	1.00	1.75	3.00	1.00	1.00	1.75	1.30	3.50	0.60
96	0.50	1.00	1.00	1.00	0.63	1.00	0.70	3.00	0.50
97	1.25	2.50	3.00	1.00	2.25	2.50	2.25	4.50	1.00
98	0.25	1.00	1.00	1.00	0.44	1.00	0.75	3.75	0.20
99	0.13	0.75	1.00	1.00	0.88	0.75	1.20	4.00	0.40
100	2.50	2.38	6.00	1.00	1.75	2.38	1.50	4.00	0.75
101	1.25	1.63	1.00	1.00	1.13	1.63	2.00	6.00	0.50
102	1.50	3.00	3.00	1.00	2.81	3.00	3.00	8.00	1.25
103	0.50	1.50	1.00	1.00	0.56	1.50	2.50	6.50	0.30
104	0.25	0.75	1.00	1.00	0.44	0.75	1.00	4.00	0.20
105	0.25	0.50	1.00	1.00	0.44	0.50	0.75	3.00	0.50
106	0.63	1.25	1.00	1.00	0.63	1.25	0.40	3.50	0.30
107	0.25	1.63	1.00	1.00	0.75	1.63	1.00	3.50	0.50
108	2.25	2.50	8.00	1.00	1.88	2.50	1.50	4.00	0.70
109	0.50	0.88	2.00	1.00	0.56	0.88	2.75	6.00	0.30
110	0.25	0.50	1.00	1.00	0.13	0.50	1.00	5.50	0.20
111	1.25	1.75	3.00	1.00	0.75	1.75	0.75	4.00	0.30
112	0.25	1.50	1.00	1.00	0.75	1.50	2.00	7.00	0.40

113	0.25	1.00	1.00	1.00	0.31	1.00	6.00	15.00	0.50
114	2.75	1.50	4.00	1.00	0.75	1.50	1.25	3.50	1.00
115	0.25	0.50	1.00	1.00	0.19	0.50	0.25	4.00	0.30
116	1.13	2.00	2.00	1.00	1.31	2.00	1.75	5.50	0.50
117	0.25	0.75	1.00	1.00	0.56	0.75	0.75	3.00	0.30
118	0.50	0.60	1.00	1.00	0.56	0.60	1.50	4.00	0.50
119	0.38	1.25	1.00	1.00	0.38	1.25	1.25	5.50	0.75
120	0.38	0.75	1.00	1.00	0.25	0.75	1.00	4.50	0.40
121	0.25	0.50	1.00	1.00	0.53	0.50	0.70	3.00	0.30
122	2.00	2.00	2.00	1.00	1.75	2.00	1.50	3.00	1.00
123	0.50	1.25	1.00	1.00	0.63	1.25	1.00	2.50	0.30
124	0.13	1.20	1.00	1.00	0.44	1.20	1.00	3.00	0.20
125	0.25	0.75	1.00	1.00	0.44	0.75	1.50	4.00	0.50
126	0.13	0.50	1.00	1.00	0.19	0.50	0.60	3.00	0.20
127	0.25	1.75	1.00	1.00	0.56	1.75	1.50	3.50	0.20
128	0.13	1.38	1.00	1.00	0.50	1.38	1.50	3.75	0.30
129	0.13	1.25	1.00	1.00	0.38	1.25	1.25	3.00	0.30
130	1.00	1.75	3.00	1.00	1.00	1.75	1.75	4.00	0.30
131	0.75	1.25	2.00	1.00	0.63	1.25	0.75	3.00	0.25
132	0.50	1.75	2.00	1.00	1.13	1.75	1.00	3.50	0.75
133	0.75	1.25	2.00	1.00	0.38	1.25	0.75	3.50	0.30
134	2.50	2.25	5.00	1.00	1.56	2.25	1.75	3.25	0.40
135	1.13	1.50	2.00	1.00	0.75	1.50	1.20	4.00	0.20
136	0.50	0.63	1.00	1.00	0.44	0.63	2.00	5.50	0.60
137	1.00	1.38	2.00	1.00	0.50	1.38	0.50	2.00	0.30
138	0.13	1.00	1.00	1.00	0.18	1.00	0.40	1.50	0.30
139	1.38	1.75	1.00	1.00	2.06	1.75	2.00	5.50	0.40
140	1.25	0.63	3.00	1.00	0.38	0.63	0.75	3.00	0.60
141	0.25	1.25	1.00	1.00	0.44	1.25	1.00	3.50	0.20

142	0.50	1.50	1.00	1.00	0.75	1.50	1.60	4.00	0.50
143	0.25	1.25	1.00	1.00	0.63	1.25	1.00	4.00	0.40
144	1.25	0.13	1.00	1.00	0.44	0.13	0.75	3.50	0.30
145	0.13	1.75	1.00	1.00	0.63	1.75	1.00	3.00	0.30
146	0.25	1.50	1.00	1.00	0.38	1.50	1.00	2.50	0.50
147	0.75	0.75	1.00	1.00	0.44	0.75	0.75	2.00	0.45
148	0.25	0.50	1.00	1.00	0.25	0.50	0.50	2.00	0.30
149	0.38	0.75	1.00	1.00	0.13	0.75	0.75	2.25	0.30
150	0.50	1.25	1.00	1.00	0.44	1.25	1.25	3.50	0.75
151	1.25	1.00	2.00	1.00	0.81	1.00	0.75	2.50	0.20
152	0.50	1.25	1.00	1.00	0.38	1.25	1.00	3.25	0.30
153	0.25	0.50	1.00	1.00	0.25	0.50	1.50	4.50	0.40
154	0.50	0.75	1.00	1.00	0.25	0.75	1.00	3.50	0.20
155	0.63	0.38	1.00	1.00	0.31	0.38	1.00	3.50	0.30
156	0.60	1.25	1.00	1.00	0.38	1.25	1.00	3.00	0.30
157	0.25	0.75	1.00	1.00	0.44	0.75	2.00	6.00	0.50
158	1.25	1.25	3.00	1.00	1.94	1.25	1.25	5.50	0.30
159	1.00	1.75	2.00	1.00	1.75	1.75	1.25	5.75	0.40
160	1.00	1.25	2.00	1.00	0.75	1.25	1.50	3.50	0.40
161	0.25	1.25	1.00	1.00	0.81	1.25	1.00	3.00	0.30
162	0.50	1.25	2.00	1.00	0.56	1.25	0.50	2.50	0.20
163	0.25	0.75	1.00	1.00	0.19	0.75	0.50	2.00	0.30
164	0.13	0.75	1.00	1.00	0.25	0.75	2.00	5.50	0.50
165	1.50	2.75	1.00	1.00	1.94	2.75	1.25	5.50	0.20
166	0.25	1.50	1.00	1.00	0.63	1.50	1.50	5.75	0.30
167	0.50	1.75	2.00	1.00	1.25	1.75	1.00	3.00	0.30
168	0.13	0.38	1.00	1.00	0.06	0.38	1.00	3.00	0.20
169	1.00	1.25	1.00	1.00	0.44	1.25	1.25	3.50	0.50
170	0.13	1.50	1.00	1.00	0.44	1.50	0.75	2.50	0.30

171	0.38	1.00	1.00	1.00	0.38	1.00	2.00	5.00	0.30
172	1.63	2.25	1.00	1.00	1.06	2.25	2.00	5.50	0.20
173	0.50	1.00	1.00	1.00	1.25	1.00	0.75	2.50	0.20
174	0.38	0.75	1.00	1.00	0.31	0.75	0.75	2.00	0.30
175	0.25	1.50	1.00	1.00	0.19	1.50	1.25	3.50	0.20
176	0.13	1.25	1.00	1.00	0.56	1.25	1.00	3.00	0.20
177	1.25	1.50	3.00	1.00	0.25	1.50	1.60	3.50	1.50
178	1.05	1.63	3.00	1.00	0.50	1.63	1.50	4.00	0.20
179	1.00	1.50	2.00	1.00	0.50	1.50	1.00	3.50	0.30
180	1.25	2.50	2.00	1.00	0.81	2.50	2.00	5.00	0.40
181	1.50	2.75	2.00	1.00	1.38	2.75	2.50	5.50	0.40
182	1.75	1.38	2.00	1.00	1.44	1.38	1.25	4.50	0.50
183	1.25	1.75	3.00	1.00	0.81	1.75	1.50	4.50	0.75
184	0.38	2.58	1.00	1.00	1.25	2.58	2.50	6.00	0.20
185	1.75	3.13	4.00	1.00	0.88	3.13	2.60	6.00	0.30
186	0.38	1.25	1.00	1.00	1.38	1.25	1.20	4.25	0.20
187	0.13	2.13	1.00	1.00	0.50	2.13	1.50	4.50	0.30
188	1.00	1.25	2.00	1.00	0.50	1.25			
189	2.75	3.50	4.00	1.00	2.44	3.50	1.20	4.00	0.40
190	0.38	1.25	1.00	1.00	0.19	1.25	3.25	8.00	1.00
191	0.63	1.13	2.00	1.00	0.56	1.13	0.75	3.50	0.45
192	2.00	1.75	2.00	1.00	1.06	1.75	1.00	3.50	0.50
193	1.00	1.00	2.00	1.00	0.31	1.00	1.75	4.00	0.70
194	0.75	1.25	1.00	1.00	0.25	1.25	0.75	3.00	0.30
195	0.75	1.75	2.00	1.00	0.56	1.75	1.10	3.50	0.50
196	0.13	1.75	1.00	1.00	0.75	1.75	1.60	3.50	0.50
197	0.50	2.25	1.00	1.00	1.19	2.25	1.70	4.50	0.40
198	0.25	1.75	1.00	1.00	0.75	1.75	2.00	5.00	0.30
199	0.25	2.38	2.00	1.00	0.44	2.38	1.80	4.00	0.30

200	0.25	1.25	1.00	1.00	0.31	1.25	1.50	4.00	0.10
201	0.25	1.50	1.00	1.00	0.69	1.50	1.00	3.50	0.30
202	1.50	1.63	2.00	1.00	0.94	1.63	1.50	3.50	0.30
203	1.50	1.75	3.00	1.00	1.44	1.75	1.25	4.00	0.50
204	0.26	1.25	1.00	1.00	0.44	1.25	2.00	6.00	0.40
205	0.25	1.75	1.00	1.00	0.69	1.75	1.25	4.00	0.40
206	0.13	1.00	1.00	1.00	0.31	1.00	2.00	5.00	0.30
207	0.25	1.63	1.00	1.00	0.69	1.63	1.00	3.00	0.30
208	0.38	1.13	1.00	1.00	0.25	1.13	1.25	4.50	0.40
209	0.75	1.00	2.00	1.00	0.50	1.00	0.85	2.50	0.20
210	0.13	0.38	1.00	1.00	0.44	0.38	0.75	5.00	0.60
211	1.00	1.25	2.00	1.00	0.44	1.25	1.00	4.00	0.50
212	1.50	1.25	3.00	1.00	1.13	1.25	0.75	3.00	0.40
213	0.25	1.50	1.00	1.00	0.75	1.50	1.50	3.50	0.30
214	0.13	1.75	1.00	1.00	0.75	1.75	1.50	3.75	0.40
215	1.00	1.05	2.00	1.00	0.69	1.05	0.70	2.50	0.50
216	1.38	1.05	3.00	1.00	0.50	1.05	1.00	2.00	0.40
217	0.75	1.00	2.00	1.00	0.50	1.00	0.75	2.50	0.30
218	1.00	0.75	2.00	1.00	0.56	0.75	0.50	2.00	0.20
219	0.50	1.00	1.00	1.00	0.75	1.00	0.50	2.50	0.30
220	0.50	1.75	1.00	1.00	1.18	1.75	1.60	4.50	0.20
221	2.50	2.75	3.00	1.00	1.81	2.75	2.50	6.50	0.30
222	2.25	2.75	2.00	1.00	1.81	2.75	2.00	6.00	0.60
223	2.75	0.38	3.00	1.00	0.38	0.38	0.50	2.50	0.20
224	1.50	2.25	3.00	1.00	1.00	2.25	2.00	5.50	0.50
225	0.25	1.25	2.00	1.00	1.13	1.25	1.25	3.50	0.50
226	0.50	2.50	1.00	1.00	2.19	2.50	1.50	4.00	0.70
227	1.75	1.50	2.00	1.00	0.69	1.50	1.25	4.00	0.50
228	0.50	1.75	1.00	1.00	0.69	1.75	1.50	3.75	0.30

229	1.38	0.88	3.00	1.00	0.19	0.88	1.00	3.00	0.20
230	1.38	2.00	3.00	1.00	1.13	2.00	2.00	5.00	0.30
231	2.50	4.25	4.00	1.00	2.56	4.25	4.50	12.00	0.75
232	0.25	1.25	1.00	1.00	0.50	1.25	1.00	3.50	0.50
233	0.25	1.25	1.00	1.00	0.50	1.25	1.25	3.75	0.40
234	0.13	1.25	2.00	1.00	0.44	1.25	0.50	2.00	0.20
235	0.25	0.50	1.00	1.00	0.38	0.50	0.60	2.50	0.30
236	0.13	0.63	1.00	1.00	0.38	0.63	1.10	3.50	0.35
237	0.13	1.00	1.00	1.00	0.38	1.00	1.00	3.00	0.40
238	0.25	0.75	1.00	1.00	0.25	0.75	0.75	3.00	0.30
239	0.25	0.75	1.00	1.00	0.19	0.75	0.60	2.50	0.20
240	0.13	0.63	1.00	1.00	0.13	0.63	0.50	2.00	0.20
241	0.50	0.75	1.00	1.00	0.38	0.75	0.90	2.50	0.20
242	0.50	2.50	1.00	1.00	1.25	2.50	2.25	5.75	0.30
243	1.75	2.50	3.00	1.00	1.25	2.50	1.00	2.50	0.60
244	1.00	2.50	2.00	1.00	1.00	2.50	1.25	3.50	0.75
245	1.00	2.75	1.00	1.00	1.00	2.75	0.75	3.00	0.60
246	1.00	1.50	2.00	1.00	0.88	1.50	1.25	3.00	0.50
247	1.50	3.00	2.00	1.00	1.50	3.00	2.75	5.00	0.60
248	1.00	1.50	1.00	1.00	0.69	1.50	1.00	2.50	0.40
249	1.00	1.20	1.00	1.00	0.19	1.20	2.00	4.50	0.40
250	0.90	2.20	1.00	1.00	1.13	2.20	0.75	3.00	0.10
251	1.00	3.50	1.00	1.00	1.25	3.50	0.75	3.00	0.40
252	0.50	2.90	1.00	1.00	1.13	2.90	0.85	3.20	0.20
253	0.50	1.50	1.00	1.00	0.31	1.50	1.75	4.50	0.40
254	1.00	1.50	3.00	1.00	0.69	1.50	1.00	4.00	0.75
255	1.25	1.75	3.00	1.00	1.50	1.75	1.00	4.25	0.50
256	1.00	1.50	2.00	1.00	0.69	1.50	1.50	5.00	0.40
257	0.75	1.75	2.00	1.00	0.69	1.75	0.75	4.00	0.30

Sr. No.	TOTAL L	TOTAL N	RD	AC	ER	CR	FF	Dd	SF
1	8.25	11.00	0.58	2.08	0.38	3.37	2.33	1.18	1.57
2	3.25	6.00	0.15	0.14	0.40	1.33	0.25	17.33	32.00
3	4.75	5.00	0.20	0.25	0.18	8.45	0.97	2.24	2.35
4	3.50	2.00	0.10	0.06	0.17	6.97	0.37	7.99	4.57
5	2.75	2.00	0.15	0.14	0.27	1.86	0.24	10.46	7.60
6	0.75	2.00	0.10	0.06	0.15	4.98	0.24	2.40	6.39
7	3.00	3.00	0.15	0.14	0.40	8.84	1.67	2.40	2.40
8	4.50	8.00	0.15	0.14	0.38	14.14	2.50	2.25	4.00
9	2.13	2.00	0.20	0.25	0.44	0.75	0.21	11.30	10.64
10	1.75	2.00	0.15	0.14	0.30	3.10	0.44	4.00	4.57
11	3.50	3.00	0.10	0.06	0.18	17.90	1.02	3.11	2.67
12	2.00	2.00	0.20	0.25	0.89	3.52	1.97	2.26	2.26
13	0.75	2.00	0.20	0.25	0.32	0.75	0.15	3.99	10.64
14	2.25	2.00	0.15	0.14	0.25	6.19	0.73	2.57	2.29
15	1.50	2.00	0.15	0.14	0.38	2.21	0.39	4.79	6.39
16	0.75	2.00	0.15	0.14	0.33	7.52	1.18	0.71	1.88
17	2.00	2.00	0.25	0.39	0.42	1.11	0.37	4.57	4.57
18	4.00	5.00	0.20	0.25	0.31	3.48	0.67	4.57	5.71
19	1.75	3.00	0.10	0.06	0.33	5.97	0.63	4.67	8.00
20	1.25	2.00	0.20	0.25	0.80	1.74	0.88	2.85	4.57
21	1.25	2.00	0.15	0.14	0.50	3.98	0.94	2.22	3.55
22	1.00	2.00	0.25	0.39	0.33	1.43	0.38	1.78	3.55
23	3.25	4.00	0.10	0.06	0.27	8.96	0.75	5.77	7.10
24	1.50	2.00	0.20	0.25	0.36	0.75	0.17	7.98	10.64
25	1.50	2.00	0.15	0.14	0.30	2.65	0.38	4.00	5.33
26	1.25	2.00	0.20	0.25	0.53	1.24	0.42	3.99	6.39

27	1.25	2.00	0.10	0.06	0.18	3.98	0.23	5.00	8.00
28	3.00	5.00	0.35	0.77	0.58	0.41	0.26	9.46	15.77
29	1.50	2.00	0.40	1.01	0.53	0.50	0.33	3.00	4.00
30	2.75	3.00	0.10	0.06	0.80	10.95	2.75	4.00	4.36
31	3.50	3.00	0.15	0.14	0.40	1.33	0.25	18.62	15.96
32	0.63	2.00	0.30	0.57	0.50	1.22	0.57	0.91	2.91
33	2.00	2.00	0.15	0.14	0.43	4.86	0.98	2.91	2.91
34	2.25	4.00	0.20	0.25	0.44	2.49	0.69	3.60	6.40
35	1.25	2.00	0.35	0.77	0.78	1.14	0.97	1.43	2.29
36	3.00	4.00	0.15	0.14	0.27	12.82	1.65	1.65	2.21
37	3.50	3.00	0.10	0.06	0.27	22.88	1.92	2.43	2.09
38	3.00	3.00	0.45	1.27	0.39	0.49	0.27	4.80	4.80
39	1.00	2.00	0.25	0.39	0.28	0.95	0.21	2.67	5.33
40	6.25	5.00	0.38	0.88	0.30	3.75	1.33	1.89	1.51
41	1.75	2.00	0.25	0.39	0.67	2.23	1.17	2.00	2.29
42	1.00	2.00	0.38	0.88	0.75	0.28	0.25	4.00	8.00
43	1.75	2.00	0.20	0.25	1.33	1.49	1.25	4.67	5.33
44	1.50	2.00	0.20	0.25	1.33	0.75	0.63	7.98	10.64
45	3.75	4.00	0.75	3.54	0.60	0.44	0.63	2.40	2.56
46	1.63	2.00	0.30	0.57	0.40	1.22	0.46	2.36	2.91
47	2.75	3.00	0.38	0.88	0.47	0.85	0.47	3.67	4.00
48	1.75	2.00	0.38	0.88	0.50	0.99	0.58	2.00	2.29
49	3.50	4.00	0.10	0.06	0.27	19.89	1.67	2.80	3.20
50	0.75	2.00	0.10	0.06	0.27	1.99	0.17	6.00	16.00
51	2.00	2.00	0.25	0.39	0.33	1.91	0.50	2.67	2.67
52	4.00	4.00	0.38	0.88	0.25	1.70	0.50	2.67	2.67
53	3.75	4.00	0.30	0.57	0.38	0.77	0.27	8.56	9.13
54	3.75	4.00	0.38	0.88	0.38	2.12	0.94	2.00	2.13
55	2.00	2.00	0.25	0.39	0.45	0.73	0.26	6.94	6.94

56	2.25	3.00	0.30	0.57	0.40	0.88	0.33	4.50	6.00
57	3.50	3.00	0.25	0.39	0.29	2.86	0.64	3.11	2.67
58	1.25	2.00	0.15	0.14	0.40	1.33	0.25	6.65	10.64
59	4.00	3.00	0.38	0.88	0.43	1.06	0.54	4.26	3.20
60	0.88	2.00	0.25	0.39	0.63	0.95	0.47	2.33	5.33
61	2.75	2.00	0.50	1.57	0.44	0.99	0.69	1.76	1.28
62	2.25	3.00	0.15	0.14	0.24	4.86	0.55	3.27	4.36
63	1.75	2.00	0.38	0.88	0.75	0.64	0.56	3.11	3.55
64	1.13	2.00	0.20	0.25	0.57	0.75	0.27	5.98	10.64
65	1.63	2.00	0.20	0.25	0.40	1.69	0.43	3.82	4.71
66	2.75	2.00	0.35	0.77	0.28	2.34	0.72	1.53	1.11
67	4.75	3.00	0.50	1.57	0.40	1.31	0.83	2.30	1.45
68	3.25	3.00	0.38	0.88	0.43	0.85	0.43	4.33	4.00
69	3.50	3.00	0.30	0.57	0.30	2.43	0.69	2.55	2.18
70	1.00	2.00	0.30	0.57	0.30	0.53	0.15	3.33	6.67
71	1.00	2.00	0.15	0.14	0.40	1.33	0.25	5.32	10.64
72	2.88	2.00	0.25	0.39	0.67	2.86	1.50	2.56	1.78
73	0.75	2.00	0.38	0.88	0.30	0.42	0.15	2.00	5.33
74	4.00	2.00	0.15	0.14	0.30	2.65	0.38	10.67	5.33
75	2.25	2.00	0.25	0.39	0.50	2.86	1.13	2.00	1.78
76	9.25	6.00	0.38	0.88	0.50	3.38	1.99	3.10	2.01
77	2.25	3.00	0.75	3.54	0.50	0.14	0.17	4.50	6.00
78	2.13	2.00	0.25	0.39	0.63	1.59	0.78	3.40	3.20
79	1.75	2.00	0.25	0.39	0.33	1.43	0.38	3.11	3.55
80	1.38	2.00	0.30	0.57	0.40	1.00	0.38	2.44	3.55
81	4.75	4.00	0.38	0.88	0.60	2.26	1.60	2.38	2.00
82	3.00	3.00	0.25	0.39	0.33	0.91	0.24	8.40	8.40
83	5.25	5.00	0.38	0.88	0.43	3.68	1.86	1.62	1.54
84	1.75	2.00	0.88	4.81	0.58	0.12	0.19	3.11	3.55

85	1.75	2.00	0.15	0.14	0.30	4.42	0.63	2.80	3.20
86	4.25	2.00	0.20	0.25	0.33	14.67	3.07	1.15	0.54
87	2.50	3.00	0.88	4.81	0.58	0.17	0.27	3.08	3.69
88	3.75	5.00	0.38	0.88	0.38	0.99	0.44	4.29	5.71
89	2.00	3.00	0.25	0.39	0.67	0.95	0.50	5.33	8.00
90	2.50	3.00	0.30	0.57	0.48	1.55	0.70	2.86	3.43
91	3.00	2.00	0.25	0.39	0.33	2.55	0.67	3.00	2.00
92	1.63	2.00	0.20	0.25	0.23	1.49	0.21	4.33	5.33
93	1.45	3.00	0.15	0.14	0.24	1.77	0.20	5.80	12.00
94	1.00	3.00	0.10	0.06	0.27	2.99	0.25	5.32	15.96
95	2.75	4.00	0.30	0.57	0.46	1.77	0.77	2.75	4.00
96	1.50	2.00	0.25	0.39	0.71	1.59	0.89	2.40	3.20
97	3.75	4.00	0.50	1.57	0.44	1.43	1.00	1.67	1.78
98	1.25	2.00	0.10	0.06	0.27	6.97	0.58	2.85	4.57
99	0.88	2.00	0.20	0.25	0.33	3.48	0.73	1.00	2.29
100	4.88	7.00	0.38	0.88	0.50	1.98	1.17	2.79	4.00
101	2.88	2.00	0.25	0.39	0.25	2.86	0.56	2.56	1.78
102	4.50	4.00	0.63	2.46	0.42	1.15	0.94	1.60	1.42
103	2.00	2.00	0.15	0.14	0.12	3.98	0.23	3.56	3.56
104	1.00	2.00	0.10	0.06	0.20	6.97	0.44	2.28	4.57
105	0.75	2.00	0.25	0.39	0.67	1.11	0.58	1.71	4.57
106	1.88	2.00	0.15	0.14	0.75	4.42	1.56	3.00	3.20
107	1.88	2.00	0.25	0.39	0.50	1.91	0.75	2.50	2.67
108	4.75	9.00	0.35	0.77	0.47	2.44	1.25	2.53	4.80
109	1.38	3.00	0.15	0.14	0.11	3.98	0.20	2.44	5.33
110	0.75	2.00	0.10	0.06	0.20	1.99	0.13	6.00	16.00
111	3.00	4.00	0.15	0.14	0.40	5.30	1.00	4.00	5.33
112	1.75	2.00	0.20	0.25	0.20	2.98	0.38	2.33	2.67
113	1.25	2.00	0.25	0.39	0.08	0.80	0.05	3.99	6.39

114	4.25	5.00	0.50	1.57	0.80	0.48	0.60	5.67	6.67
115	0.75	2.00	0.15	0.14	1.20	1.33	0.75	3.99	10.64
116	3.13	3.00	0.25	0.39	0.29	3.34	0.75	2.38	2.28
117	1.00	2.00	0.15	0.14	0.40	3.98	0.75	1.78	3.55
118	1.10	2.00	0.25	0.39	0.33	1.43	0.38	1.95	3.55
119	1.63	2.00	0.38	0.88	0.60	0.42	0.30	4.33	5.33
120	1.13	2.00	0.20	0.25	0.40	0.99	0.25	4.50	8.00
121	0.75	2.00	0.15	0.14	0.43	3.71	0.75	1.43	3.81
122	4.00	3.00	0.50	1.57	0.67	1.11	1.17	2.29	1.71
123	1.75	2.00	0.15	0.14	0.30	4.42	0.63	2.80	3.20
124	1.33	2.00	0.10	0.06	0.20	6.97	0.44	3.03	4.57
125	1.00	2.00	0.25	0.39	0.33	1.11	0.29	2.28	4.57
126	0.63	2.00	0.10	0.06	0.33	2.99	0.31	3.32	10.64
127	2.00	2.00	0.10	0.06	0.13	8.96	0.38	3.55	3.55
128	1.50	2.00	0.15	0.14	0.20	3.54	0.33	3.00	4.00
129	1.38	2.00	0.15	0.14	0.24	2.65	0.30	3.67	5.33
130	2.75	4.00	0.15	0.14	0.17	7.07	0.57	2.75	4.00
131	2.00	3.00	0.13	0.10	0.33	6.36	0.83	3.20	4.80
132	2.25	3.00	0.38	0.88	0.75	1.27	1.13	2.00	2.67
133	2.00	3.00	0.15	0.14	0.40	2.65	0.50	5.33	8.00
134	4.75	6.00	0.20	0.25	0.23	6.22	0.89	3.04	3.84
135	2.63	3.00	0.10	0.06	0.17	11.93	0.63	3.50	4.00
136	1.13	2.00	0.30	0.57	0.30	0.77	0.22	2.57	4.57
137	2.38	3.00	0.15	0.14	0.60	3.54	1.00	4.75	6.00
138	1.13	2.00	0.15	0.14	0.75	1.27	0.45	6.25	11.11
139	3.13	2.00	0.20	0.25	0.20	8.21	1.03	1.51	0.97
140	1.88	4.00	0.30	0.57	0.80	0.66	0.50	5.00	10.67
141	1.50	2.00	0.10	0.06	0.20	6.97	0.44	3.42	4.57
142	2.00	2.00	0.25	0.39	0.31	1.91	0.47	2.67	2.67

143	1.50	2.00	0.20	0.25	0.40	2.49	0.63	2.40	3.20
144	1.38	2.00	0.15	0.14	0.40	3.10	0.58	3.14	4.57
145	1.88	2.00	0.15	0.14	0.30	4.42	0.63	3.00	3.20
146	1.75	2.00	0.25	0.39	0.50	0.95	0.38	4.67	5.33
147	1.50	2.00	0.23	0.32	0.60	1.38	0.58	3.42	4.57
148	0.75	2.00	0.15	0.14	0.60	1.77	0.50	3.00	8.00
149	1.13	2.00	0.15	0.14	0.40	0.88	0.17	9.00	16.00
150	1.75	2.00	0.38	0.88	0.60	0.50	0.35	4.00	4.57
151	2.25	3.00	0.10	0.06	0.27	12.93	1.08	2.77	3.69
152	1.75	2.00	0.15	0.14	0.30	2.65	0.38	4.67	5.33
153	0.75	2.00	0.20	0.25	0.27	0.99	0.17	3.00	8.00
154	1.25	2.00	0.10	0.06	0.20	3.98	0.25	5.00	8.00
155	1.00	2.00	0.15	0.14	0.30	2.21	0.31	3.19	6.39
156	1.85	2.00	0.15	0.14	0.30	2.65	0.38	4.93	5.33
157	1.00	2.00	0.25	0.39	0.25	1.11	0.22	2.28	4.57
158	2.50	4.00	0.15	0.14	0.24	13.70	1.55	1.29	2.06
159	2.75	3.00	0.20	0.25	0.32	6.96	1.40	1.57	1.71
160	2.25	3.00	0.20	0.25	0.27	2.98	0.50	3.00	4.00
161	1.50	2.00	0.15	0.14	0.30	5.75	0.81	1.85	2.46
162	1.75	3.00	0.10	0.06	0.40	8.96	1.13	3.11	5.33
163	1.00	2.00	0.15	0.14	0.60	1.33	0.38	5.32	10.64
164	0.88	2.00	0.25	0.39	0.25	0.64	0.13	3.50	8.00
165	4.25	2.00	0.10	0.06	0.16	30.82	1.55	2.19	1.03
166	1.75	2.00	0.15	0.14	0.20	4.42	0.42	2.80	3.20
167	2.25	3.00	0.15	0.14	0.30	8.84	1.25	1.80	2.40
168	0.50	2.00	0.10	0.06	0.20	0.99	0.06	8.00	32.00
169	2.25	2.00	0.25	0.39	0.40	1.11	0.35	5.14	4.57
170	1.63	2.00	0.15	0.14	0.40	3.10	0.58	3.71	4.57
171	1.38	2.00	0.15	0.14	0.15	2.65	0.19	3.67	5.33

172	3.88	2.00	0.10	0.06	0.10	16.91	0.53	3.65	1.88
173	1.50	2.00	0.10	0.06	0.27	19.89	1.67	1.20	1.60
174	1.13	2.00	0.15	0.14	0.40	2.21	0.42	3.59	6.39
175	1.75	2.00	0.10	0.06	0.16	2.99	0.15	9.31	10.64
176	1.38	2.00	0.10	0.06	0.20	8.96	0.56	2.44	3.55
177	2.75	4.00	0.75	3.54	0.94	0.07	0.16	11.00	16.00
178	2.68	4.00	0.10	0.06	0.13	7.95	0.33	5.35	8.00
179	2.50	3.00	0.15	0.14	0.30	3.54	0.50	5.00	6.00
180	3.75	3.00	0.20	0.25	0.20	3.23	0.41	4.61	3.69
181	4.25	3.00	0.20	0.25	0.16	5.49	0.55	3.08	2.17
182	3.13	3.00	0.25	0.39	0.40	3.66	1.15	2.17	2.09
183	3.00	4.00	0.38	0.88	0.50	0.92	0.54	3.69	4.92
184	2.95	2.00	0.10	0.06	0.08	19.89	0.50	2.36	1.60
185	4.88	5.00	0.15	0.14	0.12	6.19	0.34	5.57	5.71
186	1.63	2.00	0.10	0.06	0.17	21.88	1.15	1.18	1.45
187	2.25	2.00	0.15	0.14	0.20	3.54	0.33	4.50	4.00
188	2.25	3.00	0.00	0.00	ERR	ERR	ERR	4.50	6.00
189	6.25	5.00	0.20	0.25	0.33	9.70	2.03	2.56	2.05
190	1.63	2.00	0.50	1.57	0.31	0.12	0.06	8.64	10.64
191	1.75	3.00	0.23	0.32	0.60	1.77	0.75	3.11	5.33
192	3.75	3.00	0.25	0.39	0.50	2.70	1.06	3.54	2.83
193	2.00	3.00	0.35	0.77	0.40	0.41	0.18	6.39	9.58
194	2.00	2.00	0.15	0.14	0.40	1.77	0.33	8.00	8.00
195	2.50	3.00	0.25	0.39	0.45	1.43	0.51	4.44	5.33
196	1.88	2.00	0.25	0.39	0.31	1.91	0.47	2.50	2.67
197	2.75	2.00	0.20	0.25	0.24	4.73	0.70	2.31	1.68
198	2.00	2.00	0.15	0.14	0.15	5.30	0.38	2.67	2.67
199	2.63	3.00	0.15	0.14	0.17	3.10	0.24	5.99	6.85
200	1.50	2.00	0.05	0.02	0.07	19.92	0.21	4.79	6.39

202	3.75	2.00	0.15	0.14	0.80	4.68	0.69	3.59	3.80
203	3.25	4.00	0.25	0.39	0.40	3.66	1.15	2.26	2.78
204	1.51	2.00	0.20	0.25	0.20	1.74	0.22	3.45	4.57
205	2.00	2.00	0.20	0.25	0.32	2.74	0.55	2.91	2.91
206	1.13	2.00	0.15	0.14	0.15	2.21	0.16	3.59	6.39
207	1.88	2.00	0.15	0.14	0.30	4.86	0.69	2.73	2.91
208	1.50	2.00	0.20	0.25	0.32	0.99	0.20	6.00	8.00
209	1.75	3.00	0.10	0.06	0.24	7.95	0.59	3.50	6.00
210	0.50	2.00	0.30	0.57	0.80	0.77	0.58	1.14	4.57
211	2.25	3.00	0.25	0.39	0.50	1.11	0.44	5.14	6.85
212	2.75	4.00	0.20	0.25	0.53	4.47	1.50	2.44	3.56
213	1.75	2.00	0.15	0.14	0.20	5.30	0.50	2.33	2.67
214	1.88	2.00	0.20	0.25	0.27	2.98	0.50	2.50	2.67
215	2.05	3.00	0.25	0.39	0.71	1.75	0.98	2.98	4.36
216	2.43	4.00	0.20	0.25	0.40	1.99	0.50	4.85	8.00
217	1.75	3.00	0.15	0.14	0.40	3.54	0.67	3.50	6.00
218	1.75	3.00	0.10	0.06	0.40	8.96	1.13	3.11	5.33
219	1.50	2.00	0.15	0.14	0.60	5.30	1.50	2.00	2.67
220	2.25	2.00	0.10	0.06	0.13	18.82	0.74	1.90	1.69
221	5.25	4.00	0.15	0.14	0.12	12.82	0.73	2.90	2.21
222	5.00	3.00	0.30	0.57	0.30	3.20	0.91	2.76	1.65
223	3.13	4.00	0.10	0.06	0.40	5.97	0.75	8.33	10.67
224	3.75	4.00	0.25	0.39	0.25	2.55	0.50	3.75	4.00
225	1.50	3.00	0.25	0.39	0.40	2.86	0.90	1.33	2.67
226	3.00	2.00	0.35	0.77	0.47	2.84	1.46	1.37	0.91
227	3.25	3.00	0.25	0.39	0.40	1.75	0.55	4.72	4.36
228	2.25	2.00	0.15	0.14	0.20	4.86	0.46	3.27	2.91
229	2.25	4.00	0.10	0.06	0.20	2.99	0.19	11.97	21.28

230	3.38	4.00	0.15	0.14	0.15	7.95	0.56	3.00	3.56
231	6.75	5.00	0.38	0.88	0.17	2.90	0.57	2.63	1.95
232	1.50	2.00	0.25	0.39	0.50	1.27	0.50	3.00	4.00
233	1.50	2.00	0.20	0.25	0.32	1.99	0.40	3.00	4.00
234	1.38	3.00	0.10	0.06	0.40	6.97	0.88	3.14	6.85
235	0.75	2.00	0.15	0.14	0.50	2.69	0.63	1.97	5.26
236	0.75	2.00	0.18	0.19	0.32	1.97	0.35	1.97	5.26
237	1.13	2.00	0.20	0.25	0.40	1.51	0.38	2.96	5.26
238	1.00	2.00	0.15	0.14	0.40	1.77	0.33	4.00	8.00
239	1.00	2.00	0.10	0.06	0.33	2.99	0.31	5.32	10.64
240	0.75	2.00	0.10	0.06	0.40	1.99	0.25	6.00	16.00
241	1.25	2.00	0.10	0.06	0.22	6.05	0.42	3.29	5.26
242	3.00	2.00	0.15	0.14	0.13	8.84	0.56	2.40	1.60
243	4.25	4.00	0.30	0.57	0.60	2.21	1.25	3.40	3.20
244	3.50	3.00	0.38	0.88	0.60	1.13	0.80	3.50	3.00
245	3.75	2.00	0.30	0.57	0.80	1.77	1.33	3.75	2.00
246	2.50	3.00	0.25	0.39	0.40	2.24	0.70	2.84	3.41
247	4.50	3.00	0.30	0.57	0.22	2.65	0.55	3.00	2.00
248	2.50	2.00	0.20	0.25	0.40	2.74	0.69	3.63	2.91
249	2.20	2.00	0.20	0.25	0.20	0.75	0.09	11.70	10.64
250	3.10	2.00	0.05	0.02	0.13	71.59	1.50	2.76	1.78
251	4.50	2.00	0.20	0.25	0.53	4.97	1.67	3.60	1.60
252	3.40	2.00	0.10	0.06	0.24	17.90	1.32	3.02	1.78
253	2.00	2.00	0.20	0.25	0.23	1.24	0.18	6.39	6.39
254	2.50	4.00	0.38	0.88	0.75	0.78	0.69	3.63	5.81
255	3.00	4.00	0.25	0.39	0.50	3.82	1.50	2.00	2.67
256	2.50	3.00	0.20	0.25	0.27	2.74	0.46	3.63	4.36
257	2.50	3.00	0.15	0.14	0.40	4.86	0.92	3.63	4.36

Sr. No.	RD	BR	LR	CM	TR
1	1.13	1.54	10.00	0.85	0.14
2	0.11	2.25	5.00	0.06	5.33
3	0.47	1.11	4.00	0.45	0.47
4	0.07	0.56	1.00	0.13	2.28
5	0.07	0.57	1.00	0.10	3.80
6	1.11	0.50	1.00	0.42	3.19
7	0.42	0.71	2.00	0.42	0.80
8	0.79	2.60	7.00	0.44	0.50
9	0.08	0.55	1.00	0.09	5.32
10	0.29	0.17	1.00	0.25	2.28
11	0.28	0.56	2.00	0.32	0.89
12	0.44	0.14	1.00	0.44	1.13
13	0.67	0.50	1.00	0.25	5.32
14	0.35	0.29	1.00	0.39	1.14
15	0.28	0.50	1.00	0.21	3.19
16	3.78	0.50	1.00	1.42	0.94
17	0.22	0.60	1.00	0.22	2.28
18	0.27	1.00	4.00	0.22	1.14
19	0.37	0.40	2.00	0.21	2.67
20	0.56	0.67	1.00	0.35	2.28
21	0.72	0.25	1.00	0.45	1.78
22	1.13	0.33	1.00	0.56	1.78
23	0.21	0.86	3.00	0.17	1.78
24	0.17	5.00	1.00	0.13	5.32
25	0.33	0.20	1.00	0.25	2.67
26	0.40	0.25	1.00	0.25	3.19

27	0.32	0.25	1.00	0.20	4.00
28	0.18	1.40	4.00	0.11	3.15
29	0.44	0.50	1.00	0.33	2.00
30	0.27	0.57	2.00	0.25	1.45
31	0.05	0.56	2.00	0.05	5.32
32	3.52	0.25	1.00	1.10	1.45
33	0.34	0.60	1.00	0.34	1.45
34	0.49	0.80	3.00	0.28	1.60
35	1.12	0.67	1.00	0.70	1.14
36	0.81	1.00	3.00	0.60	0.55
37	0.35	0.75	2.00	0.41	0.70
38	0.21	0.71	2.00	0.21	1.60
39	0.75	0.33	1.00	0.38	2.67
40	0.42	0.47	4.00	0.53	0.30
41	0.57	0.17	1.00	0.50	1.14
42	0.50	0.33	1.00	0.25	4.00
43	0.24	0.17	1.00	0.21	2.67
44	0.17	5.00	1.00	0.13	5.32
45	0.44	0.36	3.00	0.42	0.64
46	0.52	0.30	1.00	0.42	1.45
47	0.30	1.20	2.00	0.27	1.33
48	0.57	0.40	1.00	0.50	1.14
49	0.41	1.00	3.00	0.36	0.80
50	0.44	0.50	1.00	0.17	8.00
51	0.38	0.14	1.00	0.38	1.33
52	0.38	0.60	3.00	0.38	0.67
53	0.12	1.14	3.00	0.12	2.28
54	0.53	0.50	3.00	0.50	0.53
55	0.14	0.60	1.00	0.14	3.47

56	0.30	0.50	2.00	0.22	2.00
57	0.28	0.75	2.00	0.32	0.89
58	0.24	0.67	1.00	0.15	5.32
59	0.18	0.60	2.00	0.23	1.07
60	0.98	0.17	1.00	0.43	2.67
61	0.41	0.10	1.00	0.57	0.64
62	0.41	0.50	2.00	0.31	1.45
63	0.37	0.40	1.00	0.32	1.78
64	0.30	0.50	1.00	0.17	5.32
65	0.32	0.08	1.00	0.26	2.35
66	0.48	0.10	1.00	0.65	0.56
67	0.27	0.36	2.00	0.43	0.48
68	0.21	0.44	2.00	0.23	1.33
69	0.34	0.56	2.00	0.39	0.73
70	0.60	0.33	1.00	0.30	3.33
71	0.38	0.33	1.00	0.19	5.32
72	0.27	0.05	1.00	0.39	0.89
73	1.33	0.50	1.00	0.50	2.67
74	0.05	0.78	1.00	0.09	2.67
75	0.44	0.50	1.00	0.50	0.89
76	0.21	1.06	5.00	0.32	0.33
77	0.30	0.80	2.00	0.22	2.00
78	0.28	0.31	1.00	0.29	1.60
79	0.37	0.17	1.00	0.32	1.78
80	0.60	0.10	1.00	0.41	1.78
81	0.35	1.11	3.00	0.42	0.50
82	0.12	1.40	2.00	0.12	2.80
83	0.59	0.91	4.00	0.62	0.31
84	0.37	0.40	1.00	0.32	1.78

85	0.41	0.40	1.00	0.36	1.60
86	0.41	0.42	1.00	0.87	0.27
87	0.39	1.00	2.00	0.33	1.23
88	0.31	0.88	4.00	0.23	1.14
89	0.28	0.33	2.00	0.19	2.67
90	0.42	1.00	2.00	0.35	1.14
91	0.22	0.71	1.00	0.33	1.00
92	0.28	0.08	1.00	0.23	2.67
93	0.36	0.93	2.00	0.17	4.00
94	0.56	0.33	2.00	0.19	5.32
95	0.53	0.57	3.00	0.36	1.00
96	0.56	0.50	1.00	0.42	1.60
97	0.64	0.50	3.00	0.60	0.44
98	0.56	0.25	1.00	0.35	2.28
99	2.29	0.17	1.00	1.00	1.14
100	0.52	1.05	6.00	0.36	0.57
101	0.27	0.77	1.00	0.39	0.89
102	0.56	0.50	3.00	0.63	0.36
103	0.28	0.33	1.00	0.28	1.78
104	0.88	0.33	1.00	0.44	2.28
105	1.56	0.50	1.00	0.58	2.28
106	0.36	0.50	1.00	0.33	1.60
107	0.43	0.15	1.00	0.40	1.33
108	0.75	0.90	8.00	0.39	0.53
109	0.89	0.57	2.00	0.41	1.78
110	0.44	0.50	1.00	0.17	8.00
111	0.33	0.71	3.00	0.25	1.33
112	0.49	0.17	1.00	0.43	1.33
113	0.40	0.25	1.00	0.25	3.19

114	0.21	1.83	4.00	0.18	1.33
115	0.67	0.50	1.00	0.25	5.32
116	0.40	0.56	2.00	0.42	0.76
117	1.13	0.33	1.00	0.56	1.78
118	0.93	0.83	1.00	0.51	1.78
119	0.28	0.30	1.00	0.23	2.67
120	0.40	0.50	1.00	0.22	4.00
121	1.87	0.50	1.00	0.70	1.90
122	0.33	1.00	2.00	0.44	0.57
123	0.41	0.40	1.00	0.36	1.60
124	0.50	0.10	1.00	0.33	2.28
125	0.88	0.33	1.00	0.44	2.28
126	0.96	0.25	1.00	0.30	5.32
127	0.28	0.14	1.00	0.28	1.78
128	0.44	0.09	1.00	0.33	2.00
129	0.40	0.10	1.00	0.27	2.67
130	0.53	0.57	3.00	0.36	1.00
131	0.47	0.60	2.00	0.31	1.60
132	0.67	0.29	2.00	0.50	0.89
133	0.28	0.60	2.00	0.19	2.67
134	0.42	1.11	5.00	0.33	0.64
135	0.33	0.75	2.00	0.29	1.33
136	0.69	0.80	1.00	0.39	2.28
137	0.27	0.73	2.00	0.21	2.00
138	0.28	0.13	1.00	0.16	5.56
139	0.42	0.79	1.00	0.66	0.48
140	0.43	2.00	3.00	0.20	2.67
141	0.39	0.20	1.00	0.29	2.28
142	0.38	0.33	1.00	0.38	1.33

143	0.56	0.20	1.00	0.42	1.60
144	0.46	10.00	1.00	0.32	2.28
145	0.36	0.07	1.00	0.33	1.60
146	0.24	0.17	1.00	0.21	2.67
147	0.39	1.00	1.00	0.29	2.28
148	0.89	0.50	1.00	0.33	4.00
149	0.20	0.50	1.00	0.11	8.00
150	0.29	0.40	1.00	0.25	2.28
151	0.48	1.25	2.00	0.36	1.23
152	0.24	0.40	1.00	0.21	2.67
153	0.89	0.50	1.00	0.33	4.00
154	0.32	0.67	1.00	0.20	4.00
155	0.63	1.67	1.00	0.31	3.19
156	0.22	0.48	1.00	0.20	2.67
157	0.88	0.33	1.00	0.44	2.28
158	1.24	1.00	3.00	0.78	0.52
159	0.69	0.57	2.00	0.64	0.57
160	0.44	0.80	2.00	0.33	1.33
161	0.72	0.20	1.00	0.54	1.23
162	0.55	0.40	2.00	0.32	1.78
163	0.38	0.33	1.00	0.19	5.32
164	0.65	0.17	1.00	0.29	4.00
165	0.21	0.55	1.00	0.46	0.52
166	0.41	0.17	1.00	0.36	1.60
167	0.74	0.29	2.00	0.56	0.80
168	0.50	0.33	1.00	0.13	16.00
169	0.17	0.80	1.00	0.19	2.28
170	0.33	0.08	1.00	0.27	2.28
171	0.40	0.38	1.00	0.27	2.67

172	0.14	0.72	1.00	0.27	0.94
173	1.11	0.50	1.00	0.83	0.80
174	0.49	0.50	1.00	0.28	3.19
175	0.12	0.17	1.00	0.11	5.32
176	0.60	0.10	1.00	0.41	1.78
177	0.13	0.83	3.00	0.09	4.00
178	0.28	0.65	3.00	0.19	2.00
179	0.24	0.67	2.00	0.20	2.00
180	0.17	0.50	2.00	0.22	1.23
181	0.23	0.55	2.00	0.32	0.72
182	0.44	1.27	2.00	0.46	0.70
183	0.36	0.71	3.00	0.27	1.23
184	0.29	0.15	1.00	0.42	0.80
185	0.18	0.56	4.00	0.18	1.14
186	1.04	0.30	1.00	0.85	0.73
187	0.20	0.06	1.00	0.22	2.00
188	0.30	0.80	2.00	0.22	2.00
189	0.31	0.79	4.00	0.39	0.41
190	0.14	0.30	1.00	0.12	5.32
191	0.55	0.56	2.00	0.32	1.78
192	0.23	1.14	2.00	0.28	0.94
193	0.23	1.00	2.00	0.16	3.19
194	0.13	0.60	1.00	0.13	4.00
195	0.27	0.43	2.00	0.23	1.78
196	0.43	0.07	1.00	0.40	1.33
197	0.31	0.22	1.00	0.43	0.84
198	0.38	0.14	1.00	0.33	1.33
199	0.19	0.11	2.00	0.17	2.28
200	0.28	0.20	1.00	0.21	3.19

201	0.45	0.17	1.00	0.39	1.45
202	0.29	0.92	2.00	0.30	1.07
203	0.54	0.86	3.00	0.44	0.70
204	0.38	0.21	1.00	0.29	2.28
205	0.34	0.14	1.00	0.34	1.45
206	0.49	0.13	1.00	0.28	3.19
207	0.39	0.15	1.00	0.37	1.45
208	0.22	0.33	1.00	0.17	4.00
209	0.49	0.75	2.00	0.29	2.00
210	3.50	0.33	1.00	0.88	2.28
211	0.26	0.80	2.00	0.19	2.28
212	0.60	1.20	3.00	0.41	0.89
213	0.49	0.17	1.00	0.43	1.33
214	0.43	0.07	1.00	0.40	1.33
215	0.49	0.95	2.00	0.34	1.45
216	0.34	1.31	3.00	0.21	2.00
217	0.49	0.75	2.00	0.29	2.00
218	0.55	1.33	2.00	0.32	1.78
219	0.67	0.50	1.00	0.50	1.33
220	0.47	0.29	1.00	0.53	0.85
221	0.26	0.91	3.00	0.35	0.55
222	0.22	0.82	2.00	0.36	0.55
223	0.15	7.33	3.00	0.12	2.67
224	0.28	0.67	3.00	0.27	1.00
225	1.50	0.20	2.00	0.75	0.89
226	0.49	0.20	1.00	0.73	0.46
227	0.20	1.17	2.00	0.21	1.45
228	0.27	0.29	1.00	0.31	1.45
229	0.15	1.57	3.00	0.08	5.32

230	0.40	0.69	3.00	0.33	0.89
231	0.28	0.59	4.00	0.38	0.39
232	0.44	0.20	1.00	0.33	2.00
233	0.44	0.20	1.00	0.33	2.00
234	0.70	0.10	2.00	0.32	2.28
235	1.35	0.50	1.00	0.51	2.63
236	1.35	0.20	1.00	0.51	2.63
237	0.60	0.13	1.00	0.34	2.63
238	0.50	0.33	1.00	0.25	4.00
239	0.38	0.33	1.00	0.19	5.32
240	0.44	0.20	1.00	0.17	8.00
241	0.49	0.67	1.00	0.30	2.63
242	0.28	0.20	1.00	0.42	0.80
243	0.28	0.70	3.00	0.29	0.80
244	0.24	0.40	2.00	0.29	1.00
245	0.14	0.36	1.00	0.27	1.00
246	0.42	0.67	2.00	0.35	1.14
247	0.22	0.50	2.00	0.33	0.67
248	0.22	0.67	1.00	0.28	1.45
249	0.08	0.83	1.00	0.09	5.32
250	0.23	0.41	1.00	0.36	0.89
251	0.12	0.29	1.00	0.28	0.80
252	0.19	0.17	1.00	0.33	0.89
253	0.16	0.33	1.00	0.16	3.19
254	0.44	0.67	3.00	0.28	1.45
255	0.67	0.71	3.00	0.50	0.67
256	0.33	0.67	2.00	0.28	1.45
257	0.33	0.43	2.00	0.28	1.45