UNIVERSITY OF CALCUTTA

5th SEMESTER

GEOGRAPHY HONOURS

FIELD REPORT

TOPIC :- AN APPRAISAL OF PHYSICAL AND SOCIO ECONOMIC PROFILE : A CASE STUDY OF WARD NO 5, TAKI MUNICIPALITY

C.U. ROLL NO :- 192413-11-0142

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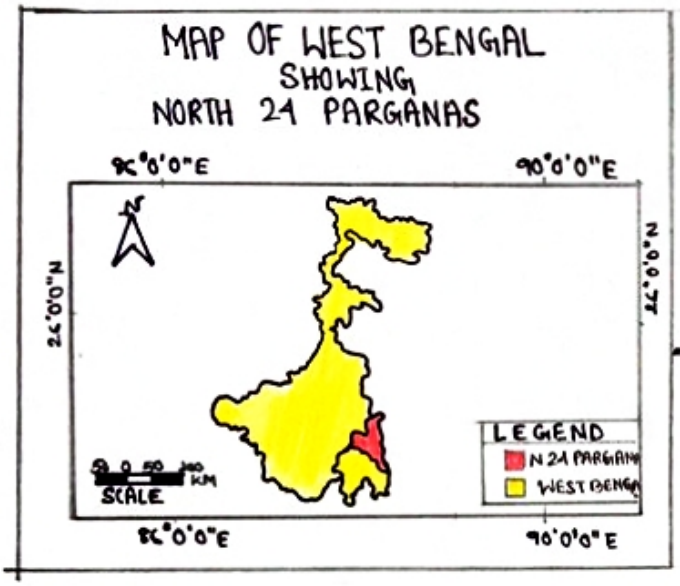
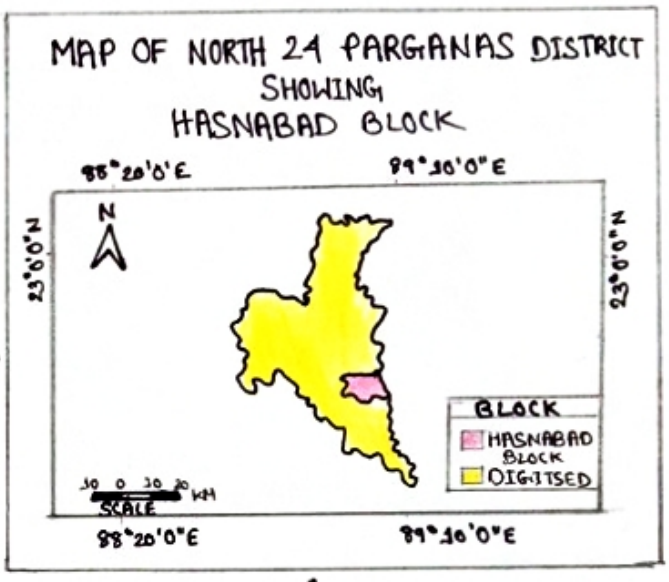
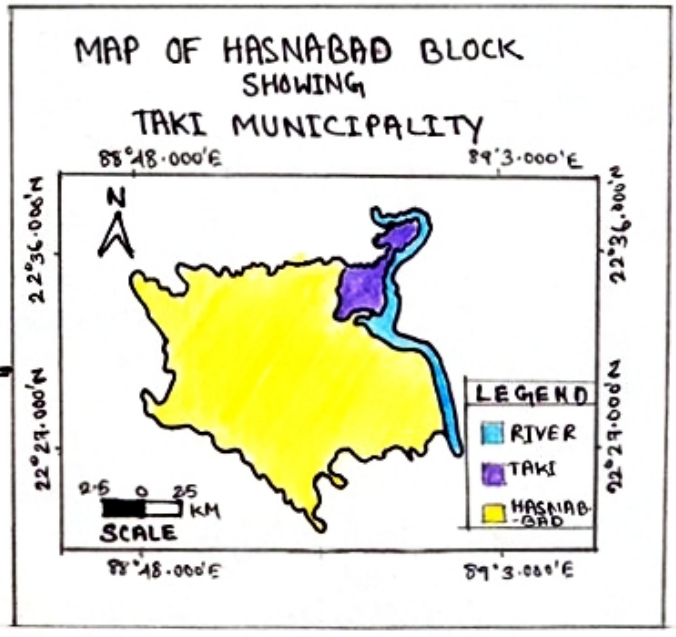
PAPER CODE :- CC-11

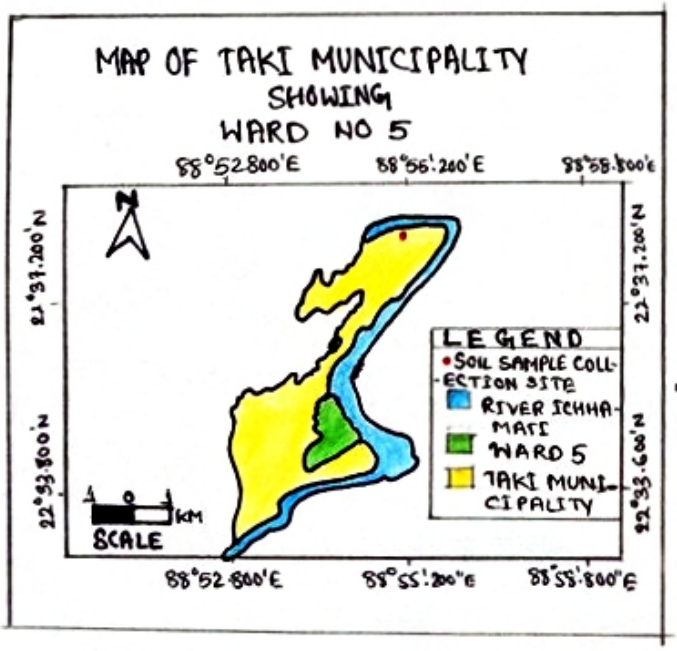
SESSION :- 2021-2022

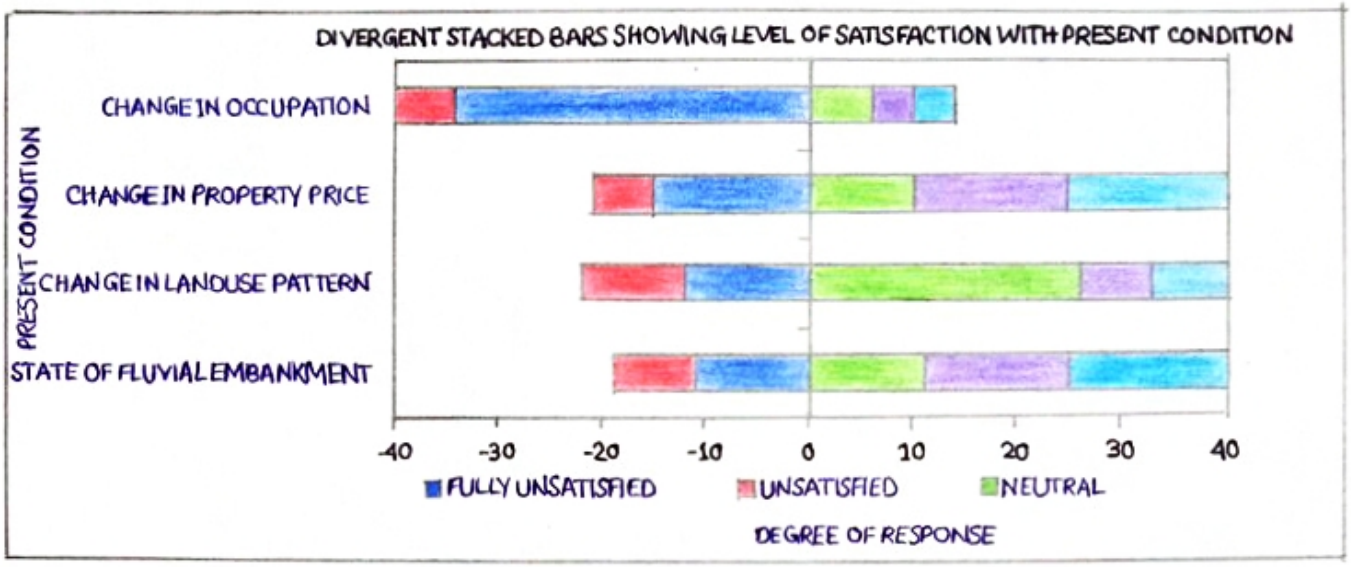
LOCATION MAP

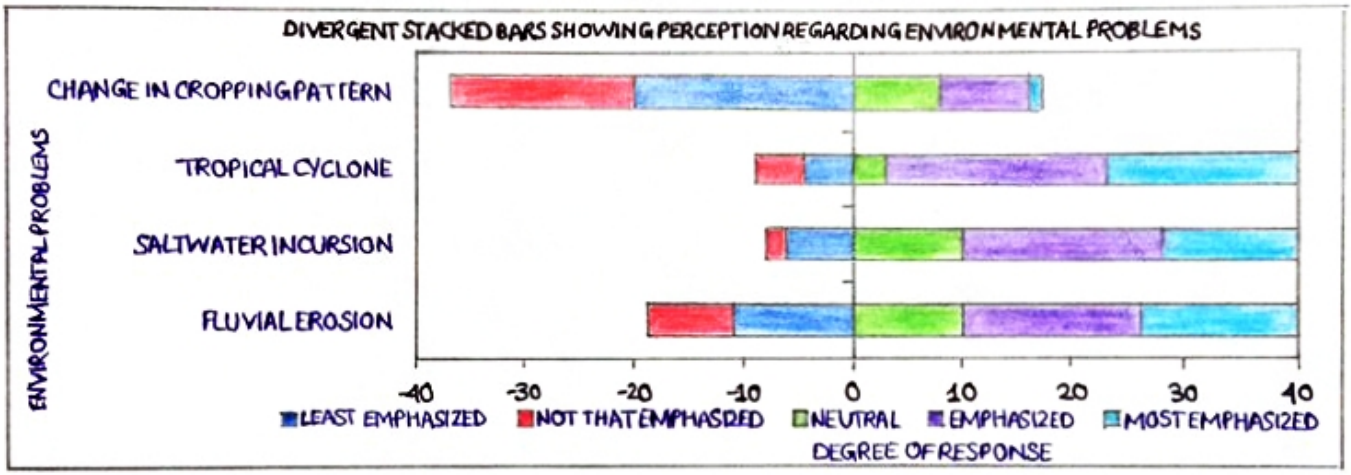


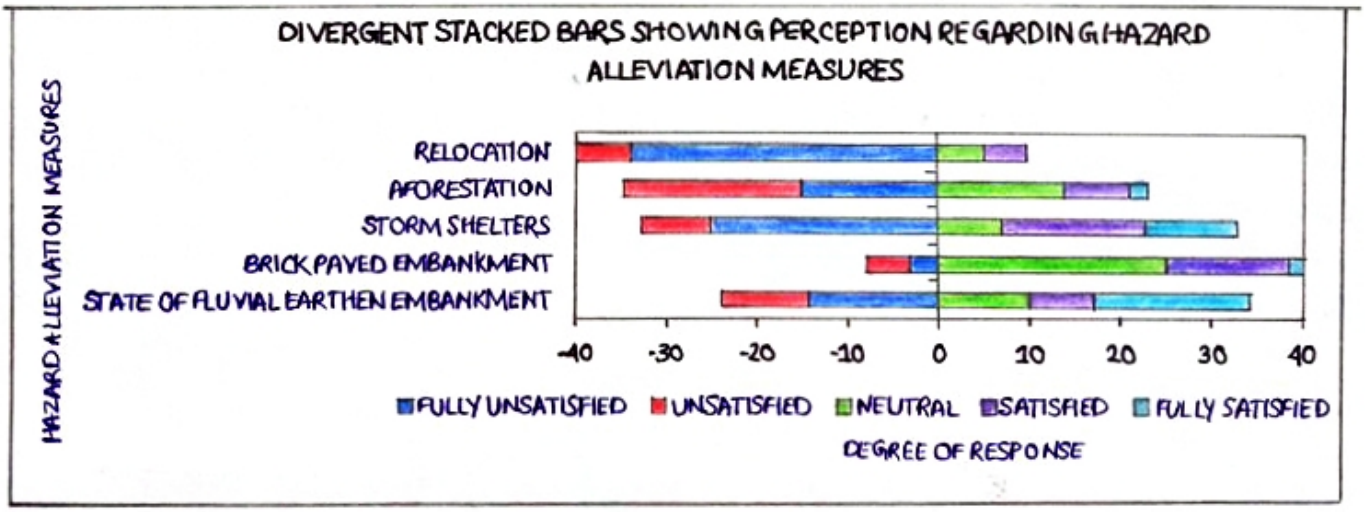







DIVERGENT STACKED BARS SHOWING LEVEL OF SATISFACTION WITH PRESENT CONDITION
PRESENT CONDITION
CHANGE IN OCCUPATION
CHANGE IN PROPERTY PRICE
CHANGE IN LANDUSE PATTERN
STATE OF FLUVIAL EMBANKMENT
-40 -30 -20 -10 0 10 20 30 40
FULLY UNSATISFIED
UNSATISFIED
NEUTRAL
DEGREE OF RESPONSE


DIVERGENT STACKED BARS SHOWING PERCEPTION REGARDING ENVIRONMENTAL PROBLEMS
ENVIRONMENTAL PROBLEMS
CHANGE IN CROPPING PATTERN
TROPICAL CYCLONE
SALTWATER INCURSION
FLUVIAL EROSION
-40 -30 -20 -10 0 10 20 30 40
LEAST EMPHASIZED
NOT THAT EMPHASIZED
NEUTRAL
EMPHASIZED
MOST EMPHASIZED
DEGREE OF RESPONSE


DIVERGENT STACKED BARS SHOWING PERCEPTION REGARDING HAZARD ALLEVIATION MEASURES
HAZARD ALLEVIATION MEASURES
RELOCATION
AFORESTATION
STORM SHELTERS
BRICK PAVED EMBANKMENT
STATE OF FLUVIAL EARTHEN EMBANKMENT
-40 -30 -20 -10 0 10 20 30 40
FULLY UNSATISFIED
UNSATISFIED
NEUTRAL
SATISFIED
FULLY SATISFIED
DEGREE OF RESPONSE

HOTEL SURVEY

- CALCULATION TABLE FOR PIE GRAPH..... APPROX ANNUAL INCOME....

NAME OF THE AREA	WARD NO	APPROX ANNUAL INCOME		TOTAL INCOME	RADIUS OF PIE $r = \sqrt{\frac{T}{\pi}}$	r IN SCALE 1 CM TO 1 UNIT
		<300000	300000 - 600000			
Taki	5	4	1	5	1.26	1.26

- CALCULATION TABLE FOR ANGLE IN DEGREE (0°).....

NAME OF THE AREA	WARD NO	APPROX ANNUAL INCOME IN DEGREE (0°)		REMARKS
		<300000	300000 - 600000	
Taki	5	288°0'0"	72°0'0"	360°

- CALCULATION TABLE FOR PIE GRAPH..... NO OF TOURISTS.....

NAME OF THE AREA	WARD NO	NO OF TOURISTS			TOTAL NO OF TOURISTS	RADIUS OF PIE $r = \sqrt{\frac{T}{\pi}}$	r IN SCALE 1 CM TO 1 UNIT
		<1000	1000 - 2000	>2000			
Taki	5	3	1	1	5	1.26	1.26

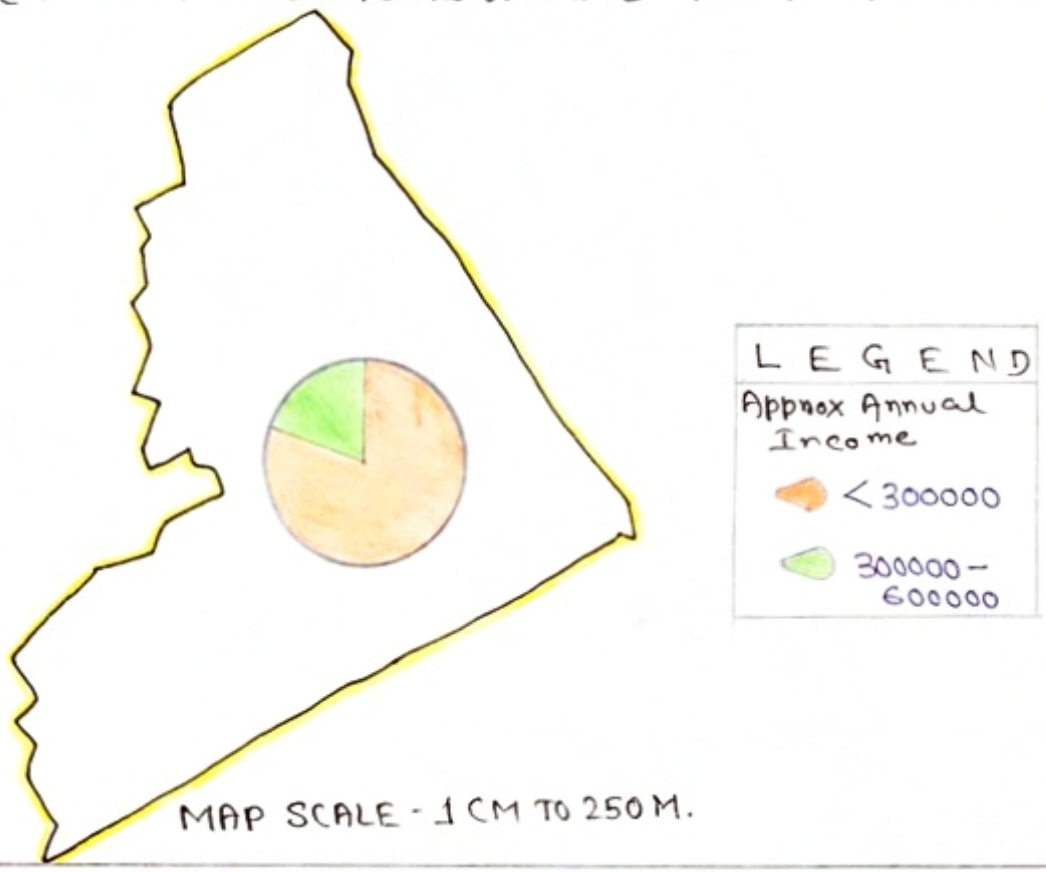
- CALCULATION TABLE FOR ANGLE IN DEGREE (0°).....

NAME OF THE AREA	WARD NO	NO OF TOURISTS IN DEGREE (0°)			REMARKS
		<1000	1000-2000	>2000	
Taki	5	216°0'0"	72°0'0"	72°0'0"	360°

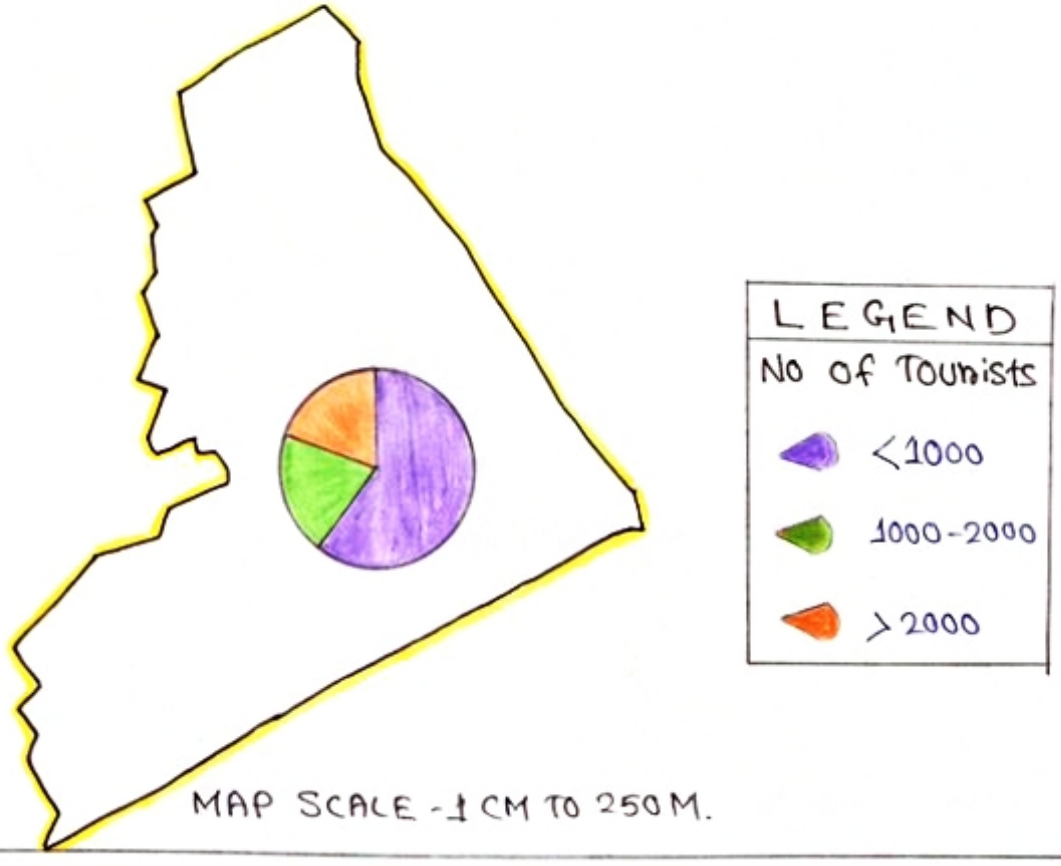
- CALCULATION TABLE FOR BAR GRAPH..... YEAR OF ESTABLISHMENT...

NAME OF THE AREA	WARD NO	YEAR OF ESTABLISHMENT			SCALE IN 1 CM TO 0.33 UNITS		
		<5 YEARS	5-10 YEARS	>10 YEARS	<5 YEARS	5-10 YEARS	>10 YEARS
Taki	5	2	2	1	6.0	6.0	3.0

PROPORTIONAL DIVIDED CIRCLE
SHOWING
THE HOTEL SURVEY (APPROX ANNUAL INCOME) OF WARD 5, TAKI MUNICIPALITY



PROPORTIONAL DIVIDED CIRCLE
SHOWING
THE HOTEL SURVEY (NO OF TOURISTS) OF WARD 5, TAKI MUNICIPALITY



MARKETING SURVEY

- CALCULATION TABLE FOR PIE GRAPH OF TYPES OF SHOPS...

SL NO	LOTTERY SHOP	GROCERY SHOP	SWEETS SHOP	TEXTILES SHOP	MEDICAL SHOP	SALOON SHOP	STATIONARY SHOP	TOTAL SHOPS	RADIUS OF PIE $r = \sqrt{\frac{T}{\pi}}$	r in scale 1 cm to 1 unit
1	1	4	1	2	1	1	1	11	1.87	1.87

- CALCULATION TABLE FOR ANGLE IN DEGREE(0°).....

SL NO	NO OF SHOPS IN DEGREE (0°)							REMARKS
	LOTTERY	GROCERY	SWEET	TEXTILES	SALOON	STATIONARY	MEDICAL	
1	32°43'	130°54'	32°43'	65°27'	32°43'	32°43'	32°43'	360°

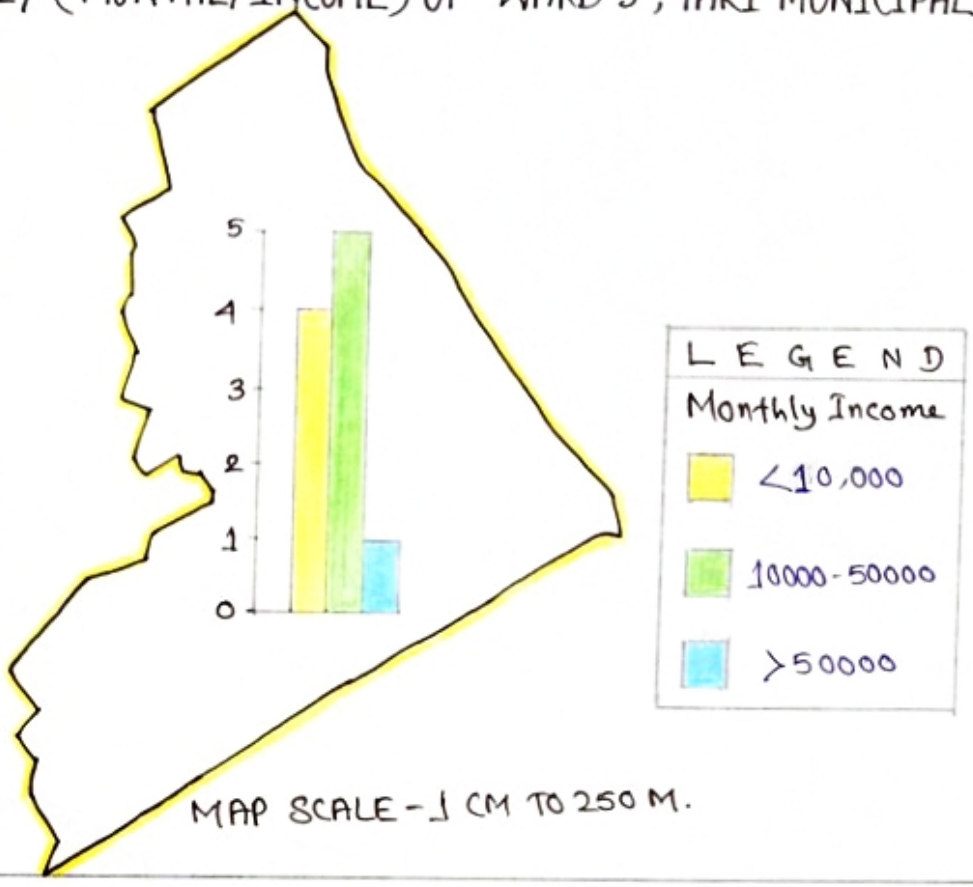
- CALCULATION TABLE FOR BAR GRAPH OF INVESMENT (RS)...

SL NO	< 50,000	1 cm to 1 unit	50,000 - 100000	1 cm to 1 unit	> 100000	1 cm to 1 unit
1	4	4	5	5	1	1

- CALCULATION TABLE FOR BAR GRAPH OF MONTHLY INCOME...

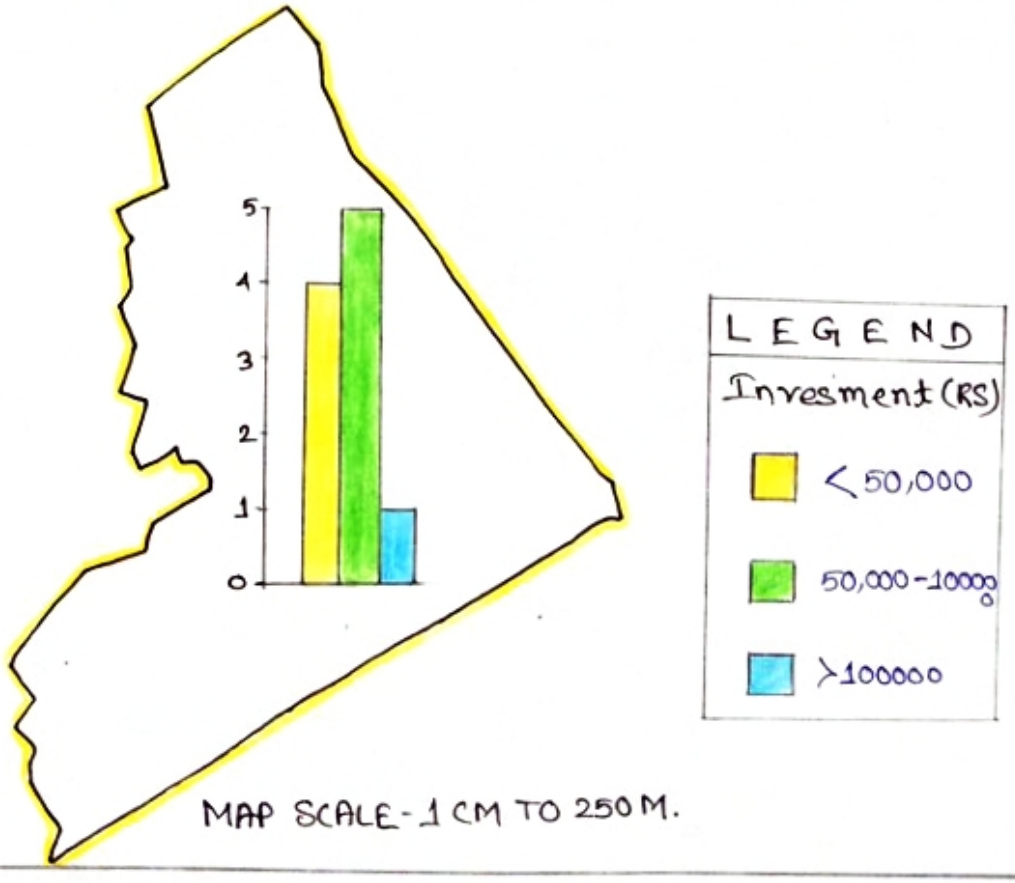
SL NO	< 10,000	1 cm to 1 unit	10,000 - 50,000	1 cm to 1 units	> 50,000	1 cm to 1 units
1	4	4	5	5	1	1

BAR GRAPH
SHOWING
THE MARKETING SURVEY (MONTHLY INCOME) OF WARD 5, TAKI MUNICIPALITY



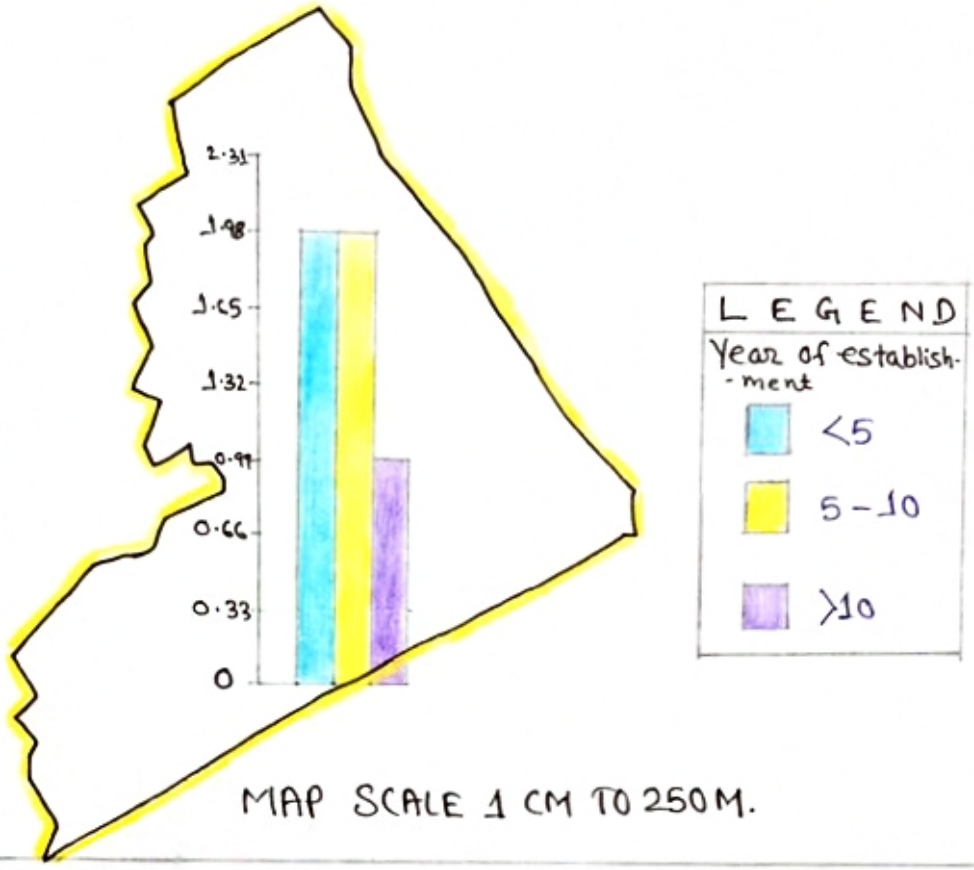
MAP SCALE - 1 CM TO 250 M.

BAR GRAPH
SHOWING
THE MARKETING SURVEY (INVESTMENT) OF WARD 5, TAKI MUNICIPALITY



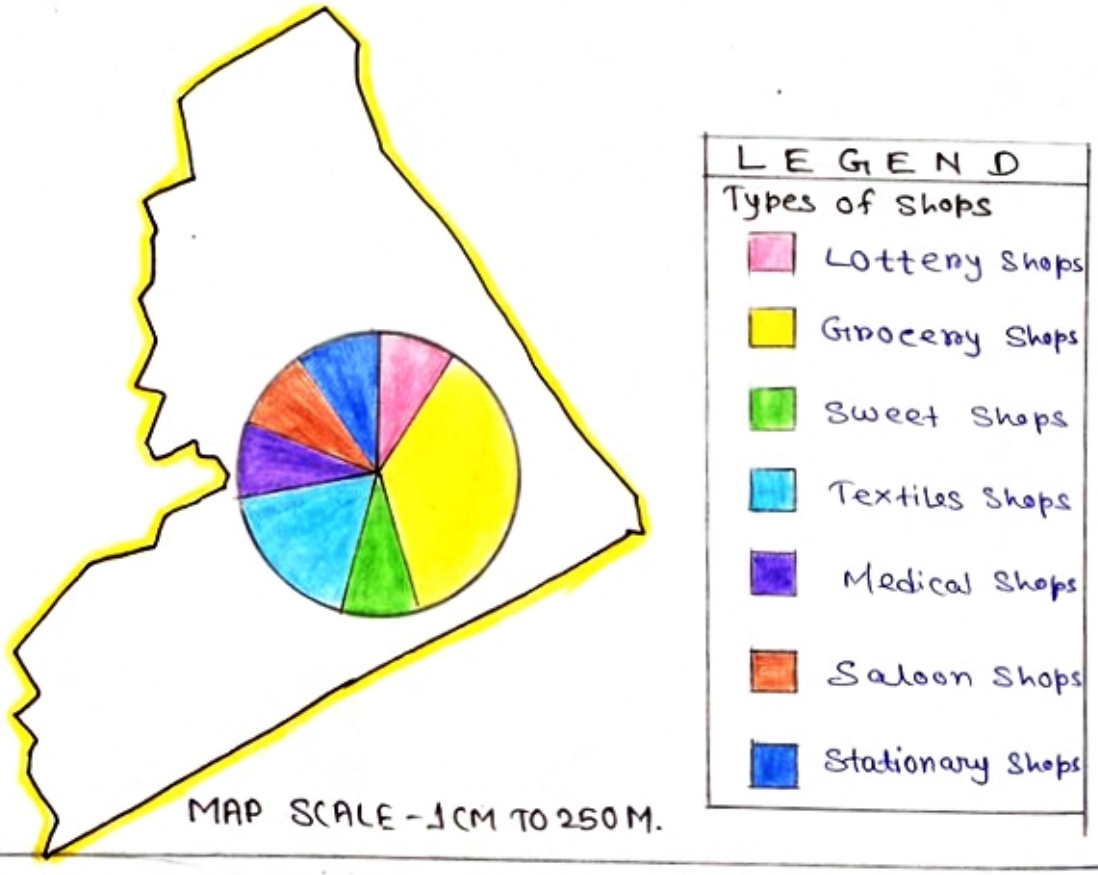
MAP SCALE - 1 CM TO 250 M.

BAR GRAPH
SHOWING
THE HOTEL SURVEY (YEAR OF ESTABLISHMENT) OF WARD 5, TAKI MUNICIPALITY



MAP SCALE 1 CM TO 250 M.

PROPOTIONAL DIVIDED CIRCLE
SHOWING
THE MARKETING SURVEY (TYPES OF SHOPS) OF WARD 5, TAKI MUNICIPALITY



MAP SCALE - 1 CM TO 250 M.

- CALCULATION TABLE FOR BAR GRAPH..... DISTANCE TO NEAREST SCHOOL.....

NAME OF THE AREA	WARD NO	DISTANCE TO NEAREST SCHOOL (m)			SCALE SELECTED 1 CM - 8 UNITS		
		<50	50 - 100	>100	<50	50 - 100	100
Taki	5	24	23	14	3	2.9	1.8

- CALCULATION TABLE FOR BAR GRAPH.... DISTANCE TO COLLEGE

NAME OF THE AREA	WARD NO	DISTANCE TO COLLEGE (m)			SCALE SELECTED 1 CM = 8 UNITS		
		<50	50 - 100	>100	<50	50 - 100	>100
Taki	5	22	11	32	2.8	1.38	4

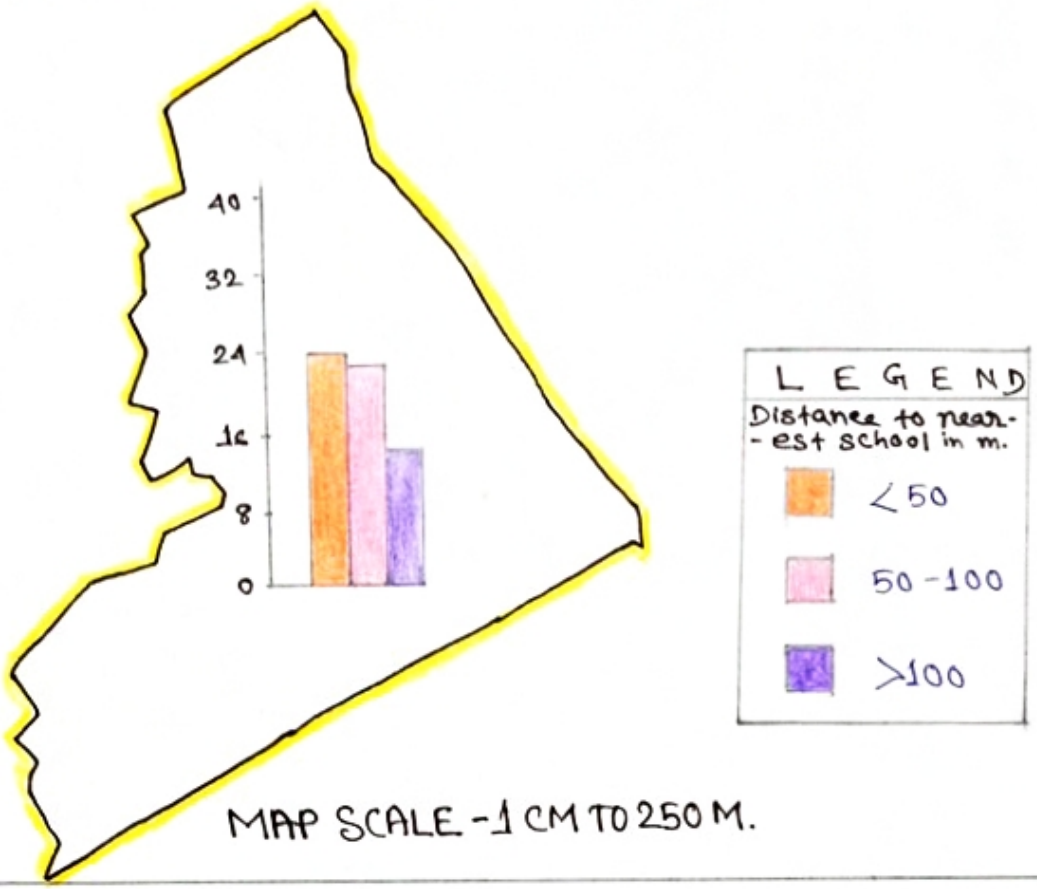
- CALCULATION TABLE FOR BAR GRAPH.... DISTANCE TO HOSPITAL..

NAME OF THE AREA	WARD NO	DISTANCE TO HOSPITAL (km)		SCALE SELECTED 1 CM = 8 UNITS	
		<1 km	>1 km	<1	>1
Taki	5	46	15	5.75	1.88

- CALCULATION TABLE FOR BAR GRAPH.... DISTANCE TO P.S.....

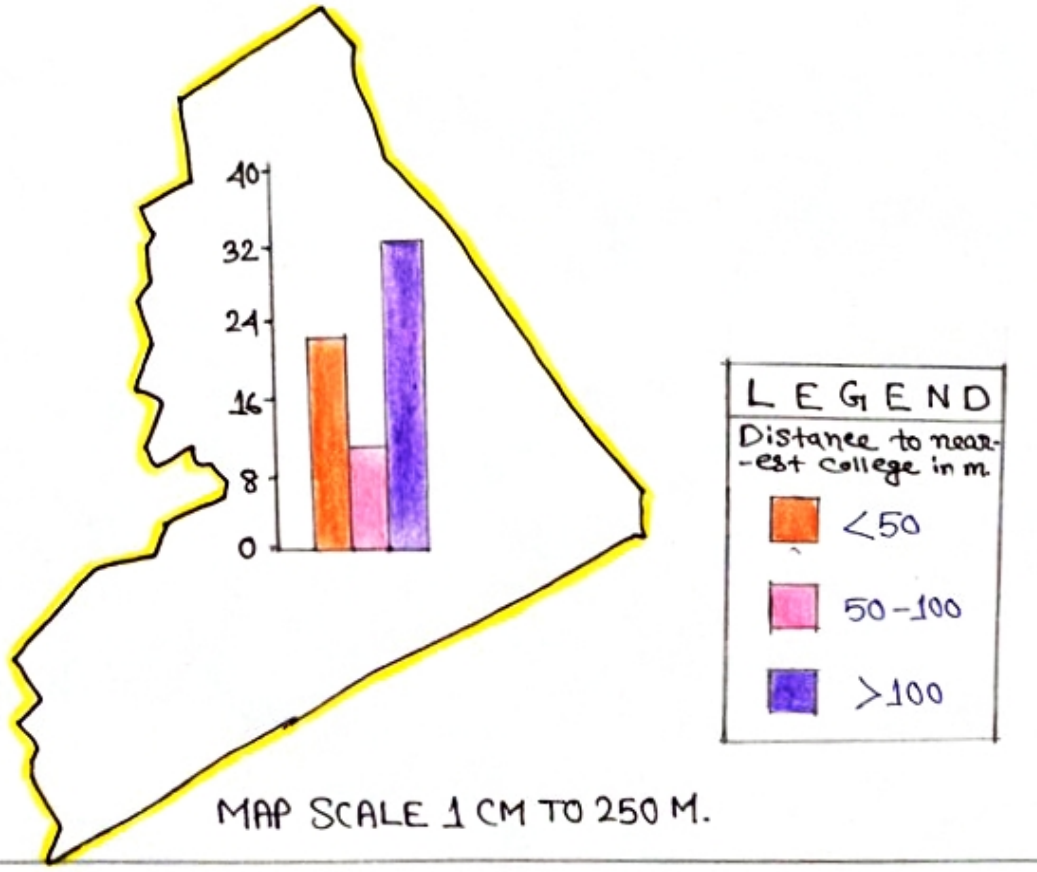
NAME OF THE AREA	WARD NO	DISTANCE TO P.S (KM)		SCALE SELECTED 1 CM = 8 UNITS	
		1	1 - 5	1	1 - 5
Taki	5	10	48	1.25	6

BAR GRAPH
SHOWING
THE NEAREST SCHOOL OF WARD 5, TAKI MUNICIPALITY



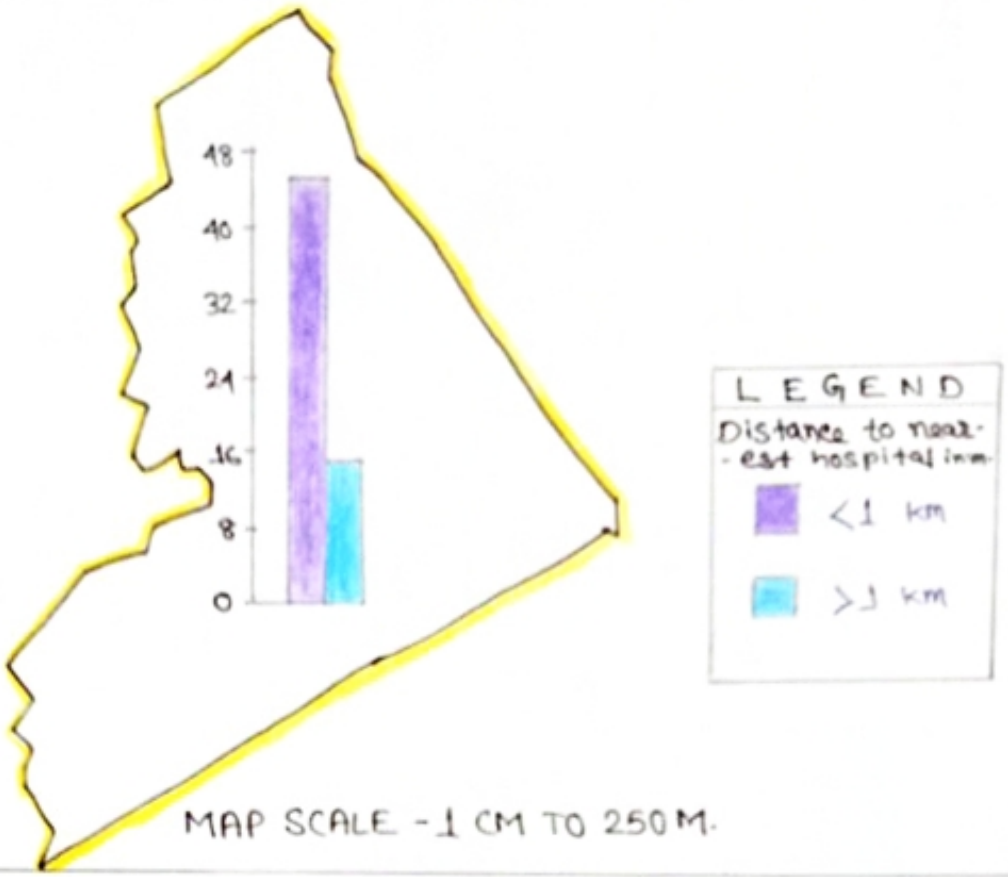
MAP SCALE - 1 CM TO 250 M.

BAR GRAPH
SHOWING
THE NEAREST COLLEGE OF WARD 5, TAKI MUNICIPALITY



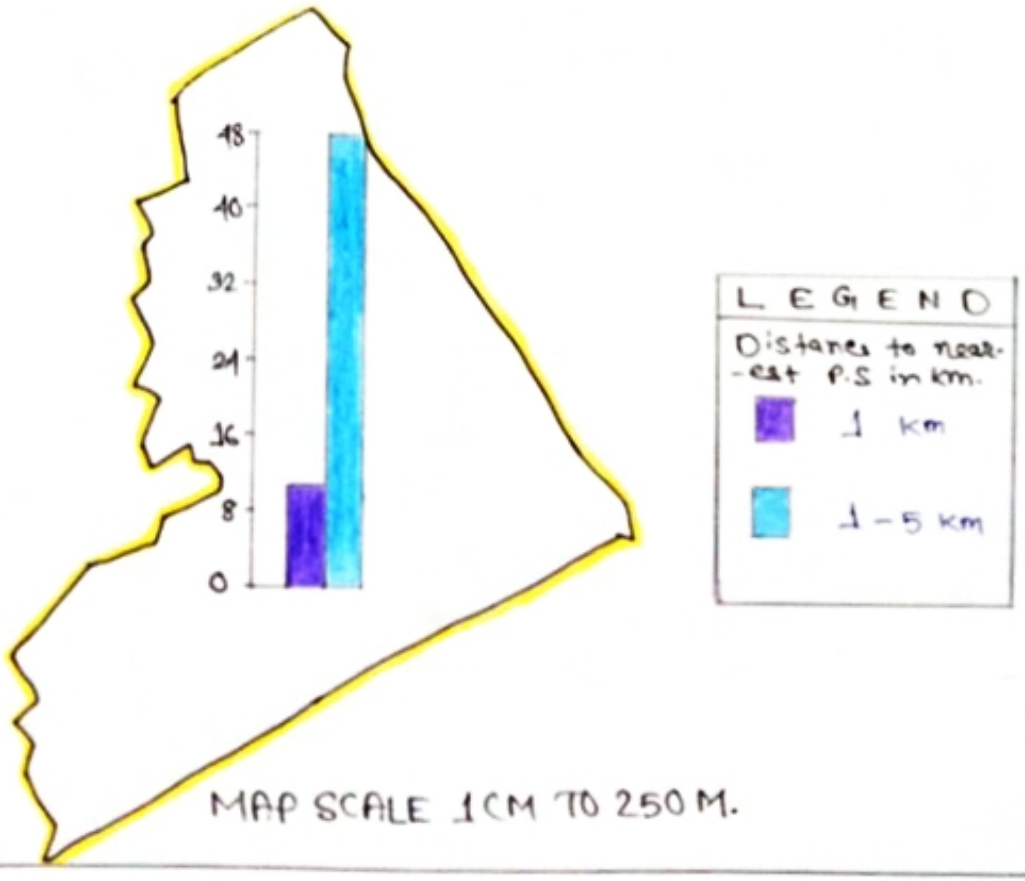
MAP SCALE 1 CM TO 250 M.

BAR GRAPH
SHOWING
THE NEAREST HOSPITAL OF WARD 5, TAKI MUNICIPALITY



MAP SCALE - 1 CM TO 250 M.

BAR GRAPH
SHOWING
THE NEAREST P.S OF WARD 5, TAKI MUNICIPALITY



MAP SCALE 1 CM TO 250 M.

- CALCULATION TABLE FOR PIE GRAPH..... CONTAMINATION...

NAME OF THE AREA	WARD NO	CONTAMINATION			TOTAL	RADIUS OF PIE $r=\sqrt{\frac{T}{\pi}}$	r IN SCALE 1 cm TO 2 UNITS
		ARSENIC	FLOURIDE	IRON			
Taki	5	20	0	6	29	3.04	1.5

- CALCULATION TABLE FOR ANGLE IN DEGREE (0°).....

NAME OF THE AREA	WARD NO	CONTAMINATION IN DEGREE (0°)			REMARKS
		ARSENIC	FLOURIDE	IRON	
Taki	5	285°31'2"	0	71°28'57"	360°

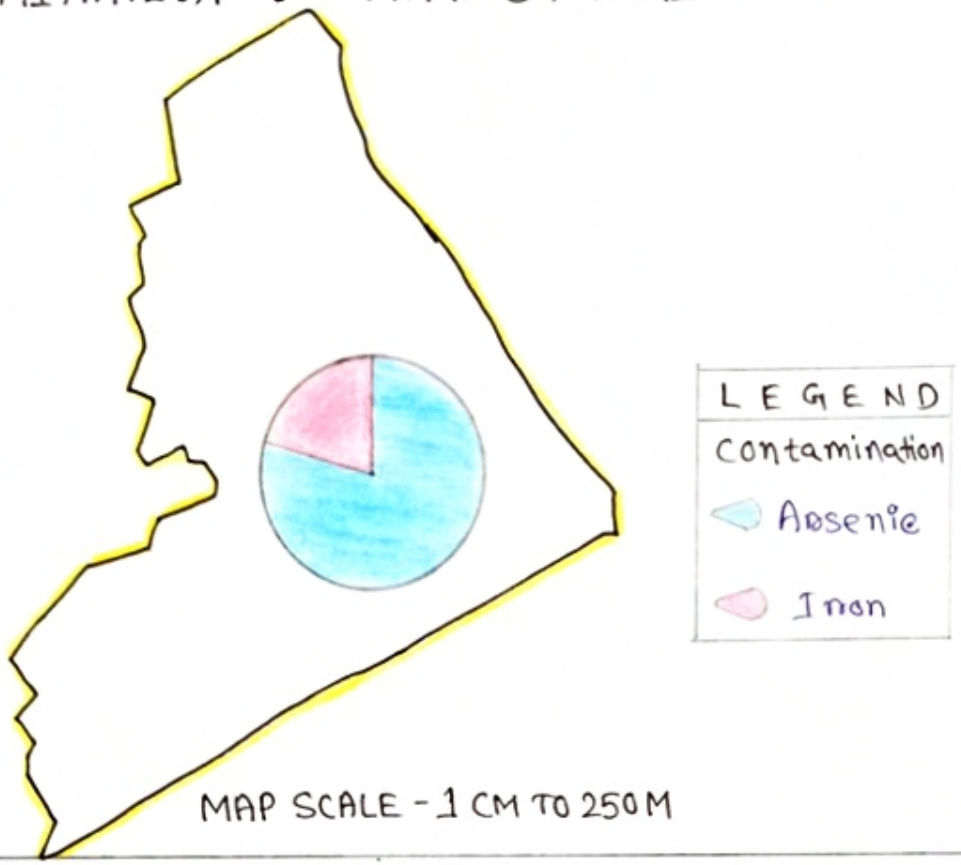
- CALCULATION TABLE FOR PIE GRAPH.... LOSS OF OCCUPATION

NAME OF THE AREA	WARD NO	LOSS OF OCCUPATION		TOTAL	RADIUS OF PIE $r=\sqrt{\frac{T}{\pi}}$	r IN SCALE 1 CM TO 2 UNITS
		YES	NO			
Taki	5	3	34	37	3.43	1.72

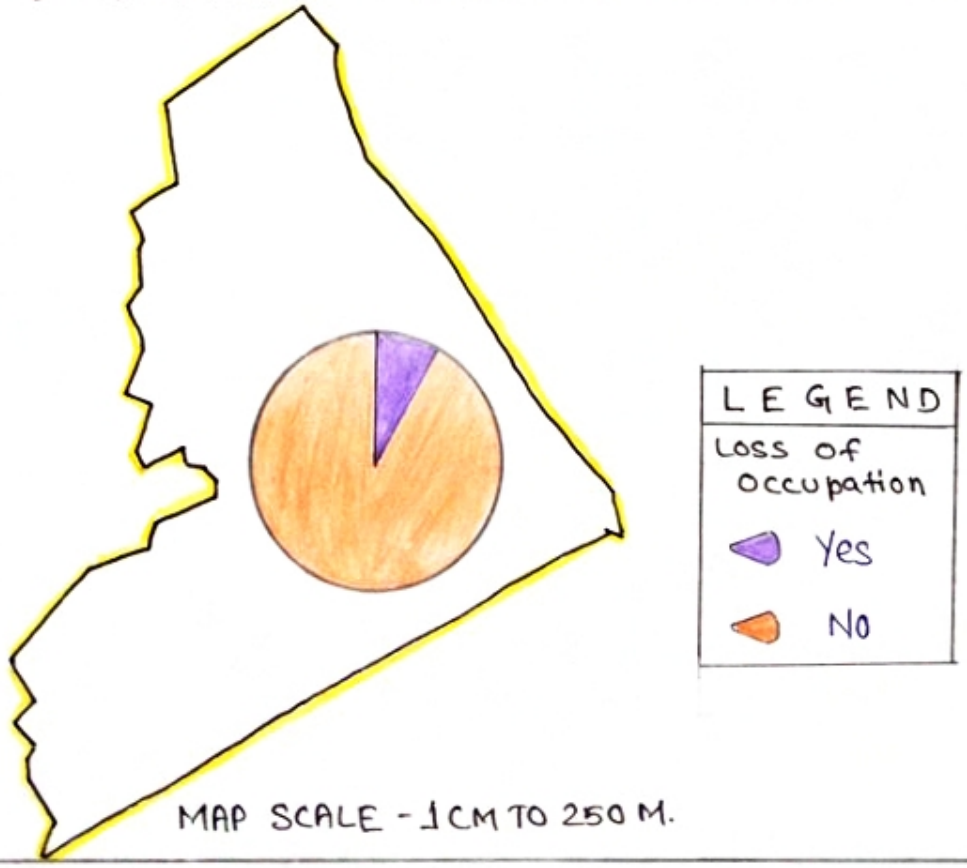
- CALCULATION TABLE FOR ANGLE IN DEGREE (0°).....

NAME OF THE AREA	WARD NO	LOSS OF OCCUPATION IN DEGREE		REMARKS
		YES	NO	
Taki	5	29°11'21"	330°48'38"	360°

PROPORTIONAL DIVIDED CIRCLE
SHOWING
THE CONTAMINATION OF WARD 5, TAKI MUNICIPALITY



PROPORTION DIVIDED CIRCLE
SHOWING
THE LOSS OF OCCUPATION OF WARD 5, TAKI MUNICIPALITY



- CALCULATION TABLE FOR BAR DIAGRAM..... NO OF SHALLOW TUBE-WELLS.....

NAME OF THE AREA	WARD NO	NO OF SHALLOW TUBEWELL			SCALE 1 CM TO 5 UNITS		
		0-2	2-4	>4	0-2	2-4	>4
Taki	5	26	2	1	5.2	0.4	0.2

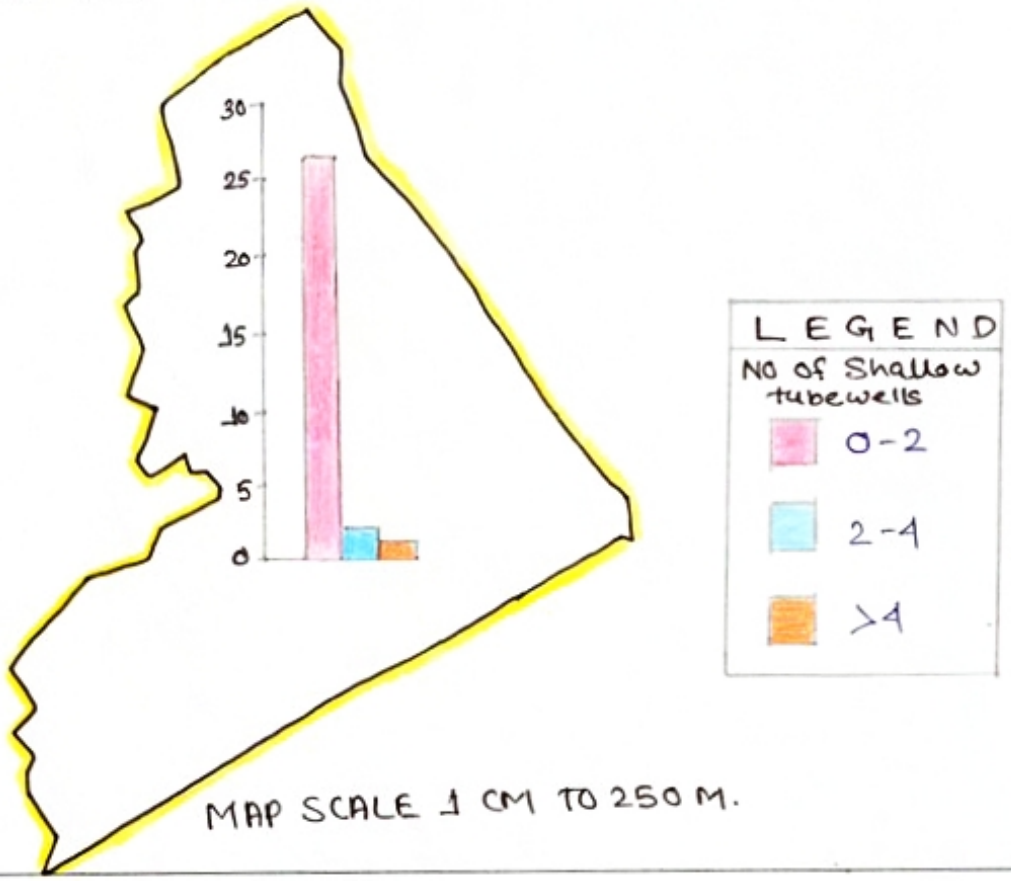
- CALCULATION TABLE FOR BAR DIAGRAM..... NO OF DEEP TUBE-WELLS.....

NAME OF THE AREA	WARD NO	NO OF DEEP TUBEWELLS			SCALE 1 CM TO 5 UNITS		
		0-2	2-4	>4	0-2	2-4	>4
Taki	5	20	4	5	4	0.8	1

- CALCULATION TABLE FOR BAR DIAGRAM....YEAR OF MIGRA-TION.....

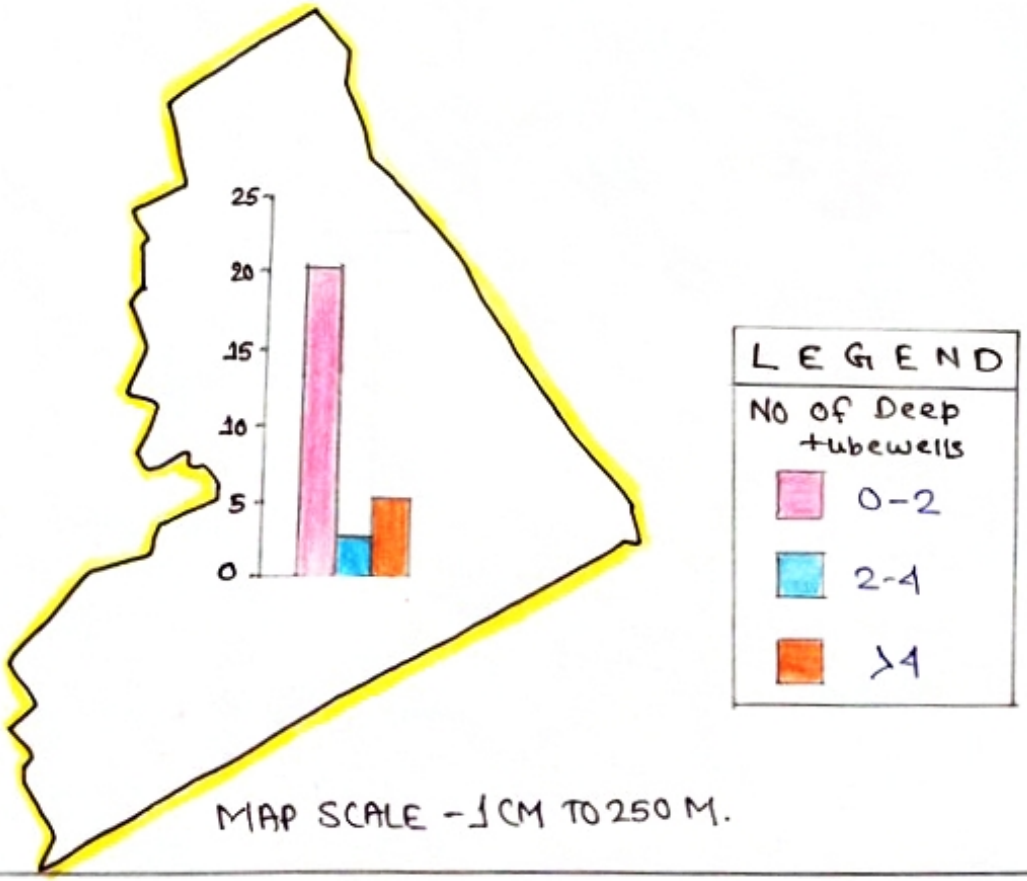
NAME OF THE AREA	WARD NO	YEAR OF MIGRATION			SCALE 1 CM TO 2 UNITS		
		<5 yrs	5-10 yrs	>10 yrs	<5	5-10	>10
Taki	5	7	1	9	3.5	0.5	4.5

BAR GRAPH
SHOWING
THE NO OF SHALLOW TUBEWELLS OF WARD 5, TAKI MUNICIPALITY



MAP SCALE 1 CM TO 250 M.

BAR GRAPH
SHOWING
THE NO OF DEEP TUBEWELLS OF WARD 5, TAKI MUNICIPALITY



MAP SCALE - 1 CM TO 250 M.

- CALCULATION TABLE FOR PIE GRAPH..... FREQUENCY OF EMBANK-MENT BREACHING.....

NAME OF THE AREA	0-3 TIMES	3-6 TIMES	TOTAL TIMES	RADIUS OF PIE $r=\sqrt{\frac{T}{\pi}}$	r IN SCALE 1 cm TO 2 Units	ANGLE IN DEGREE (°)		REMARKS
						0-3 TIMES	3-6 TIMES	
TAKI	19	9	28	2.98	1.49	244°17'	115°46'	360°

- CALCULATION TABLE FOR PIE GRAPH.... EXTINCTION OF FRUITS TREES...

NAME OF THE AREA	NO OF YES	NO OF NO	TOTAL	RADIUS OF PIE $r=\sqrt{\frac{T}{\pi}}$	r IN SCALE 1 cm TO 2 Units	ANGLE IN DEGREE (°)		REMARKS
						YES	NO	
TAKI	22	14	36	3.38	1.69	220°0'	140°0'	360°

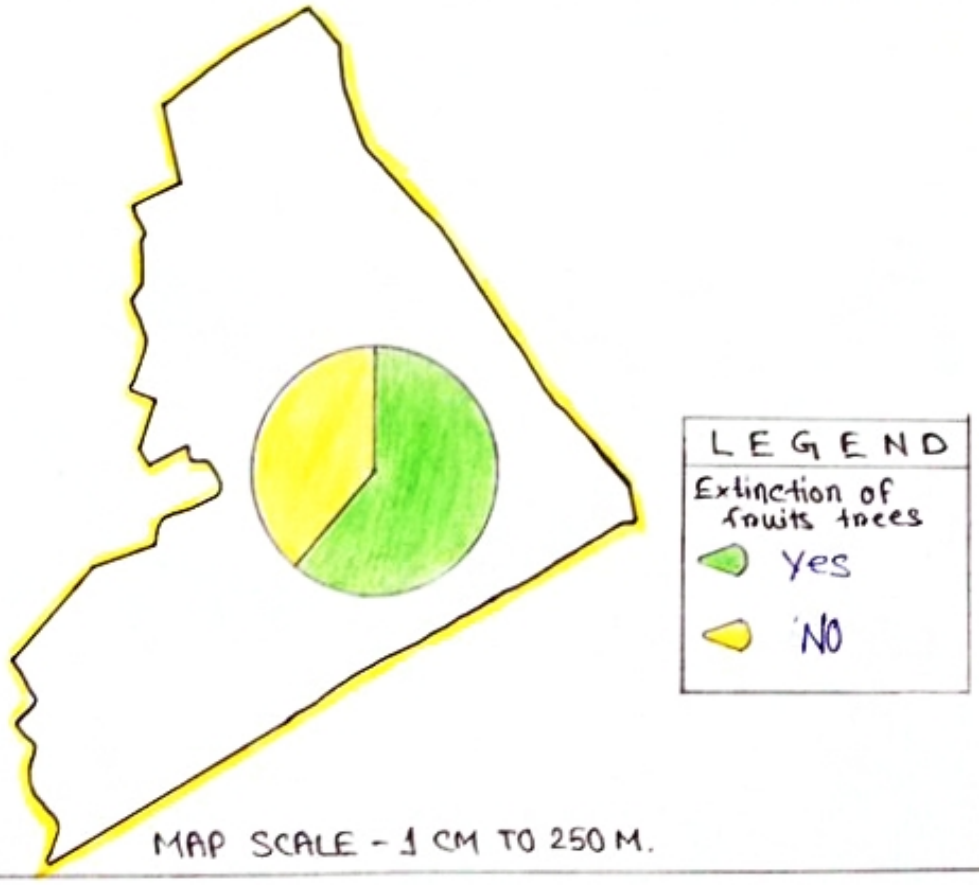
- CALCULATION TABLE FOR PIE GRAPH.... LOSS OF AGRICUITURAL LAND.....

NAME OF THE AREA	NO OF YES	NO OF NO	TOTAL	RADIUS OF PIE $r=\sqrt{\frac{T}{\pi}}$	r IN SCALE 1 cm TO 2 Unit	ANGLE IN DEGREE (°)		REMARKS
						YES	NO	
	5	31	36	3.38	1.69	50°0'	310°0'	360°

PROPORTIONAL DIVIDED CIRCLE
SHOWING
THE FREQUENCY OF EMBANKMENT BREACHING OF WARD 5.(TAKI)

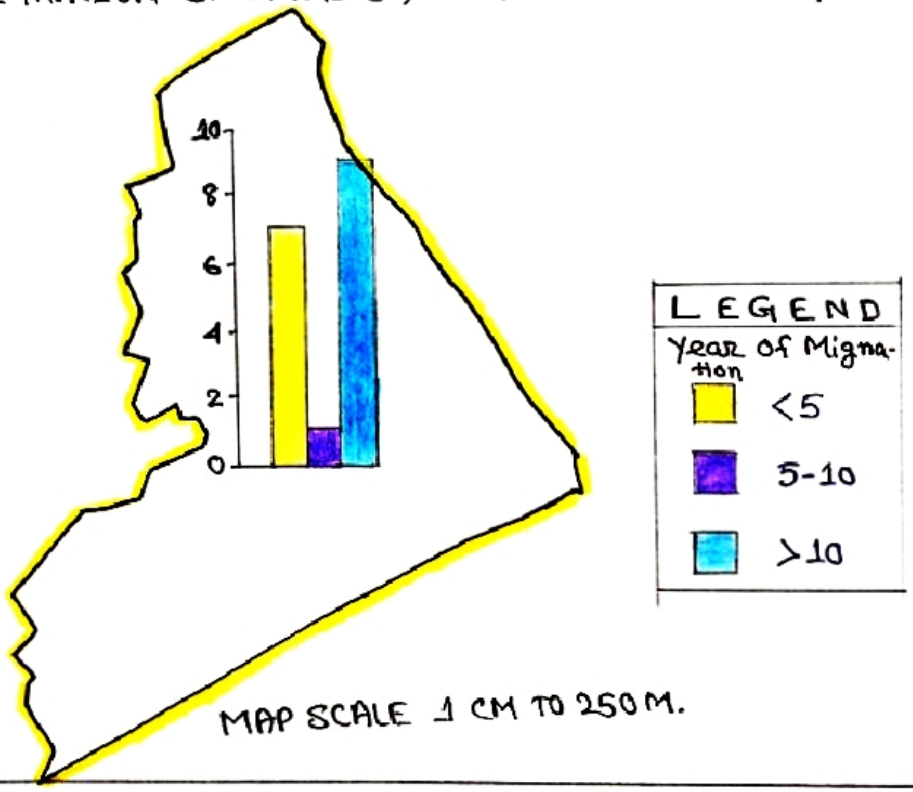
MAP SCALE - 1 CM TO 250 M.

PROPORTIONAL DIVIDED CIRCLE
SHOWING
THE EXTINCTION OF FRUITS TREES OF WARD 5, TAKI MUNICIPALITY



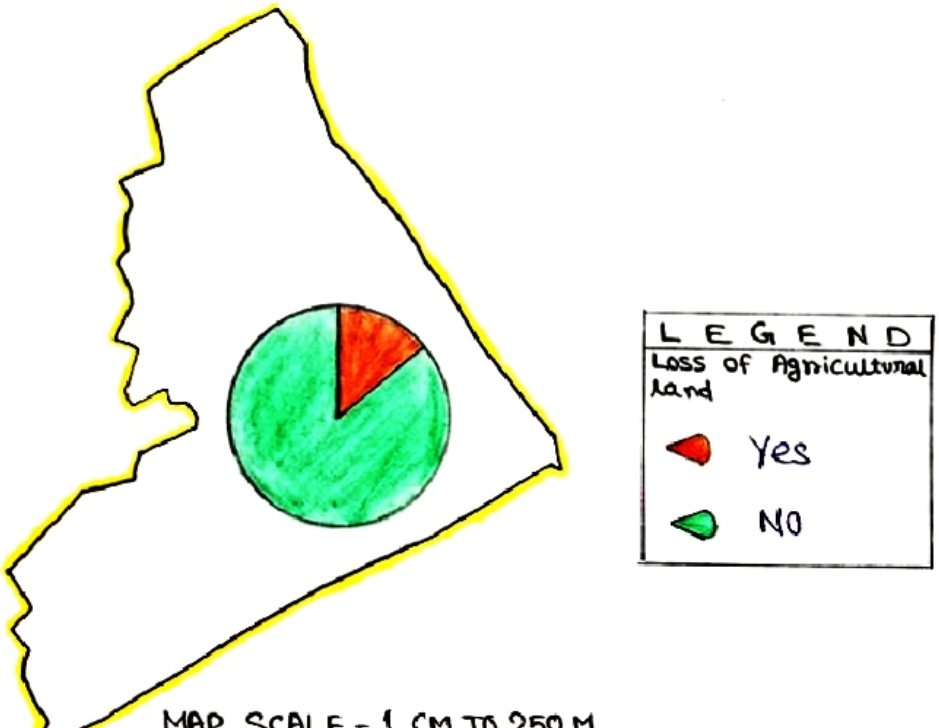
MAP SCALE - 1 CM TO 250 M.

BAR GRAPH
SHOWING
THE YEAR OF MIGRATION OF WARD 5, TAKI MUNICIPALITY



MAP SCALE 1 CM TO 250 M.

PROPORTIONAL DIVIDED CIRCLE
SHOWING
THE LOSS OF AGRICULTURAL LAND OF WARD 5, TAKI MUNICIPALITY



MAP SCALE - 1 CM TO 250 M.

- CALCULATION TABLE FOR FLOW DIAGRAM (NO OF VEHICLES)

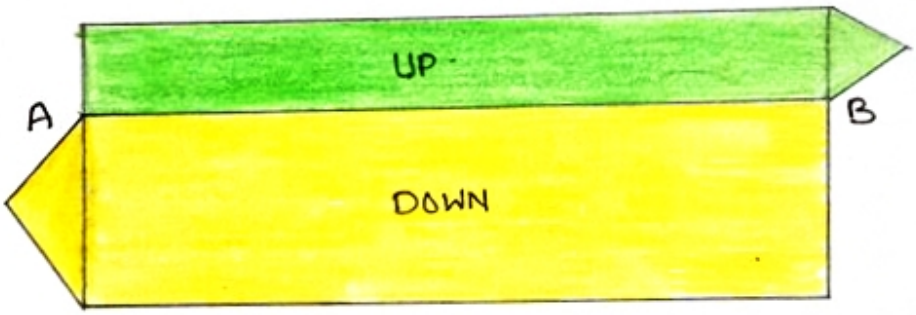
STATION	BIKE	CYCLE	LORRY	CAR	VAN	TOTO	AUTO
A - B (UP)	82	68	12	22	22	11	3
SCALE 1 cm = 20 vehi.	4.1	3.4	0.6	1.1	1.1	2.05	0.15
B - A (DOWN)	60	26	7	13	4	10	3
SCALE 1 cm = 20 vehi.	3	1.3	0.35	0.65	0.2	0.5	0.15

- CALCULATION TABLE FOR TOTAL NO OF VEHICLES.....

STATION		TOTAL NO OF VEHICLES	SCALE 1 cm to 100
FROM	TO		
A	B	250	2.5
B	A	123	1.23

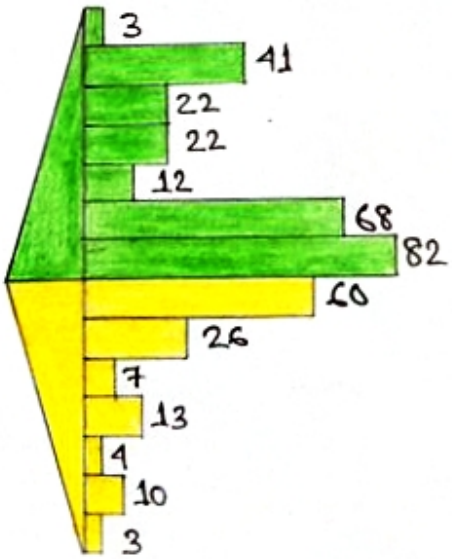
FLOW DIAGRAM (NO OF VEHICLES)

TAKI ROAD



GUIDE
A - HASNABAD
B - TAKI
- UP
- DOWN

NO OF VEHICLES



SCALE - 1 CM TO 20 VEHICLES

- CALCULATION TABLE FOR DUMPY LEVEL BY COLLIMATION METHOD.....

PLACE : TAKI, SANHATI UDYANA
INSTRUMENT NO: 1

DATE : 03/12/21
TIME : 09:20 AM

GPS NO - 2

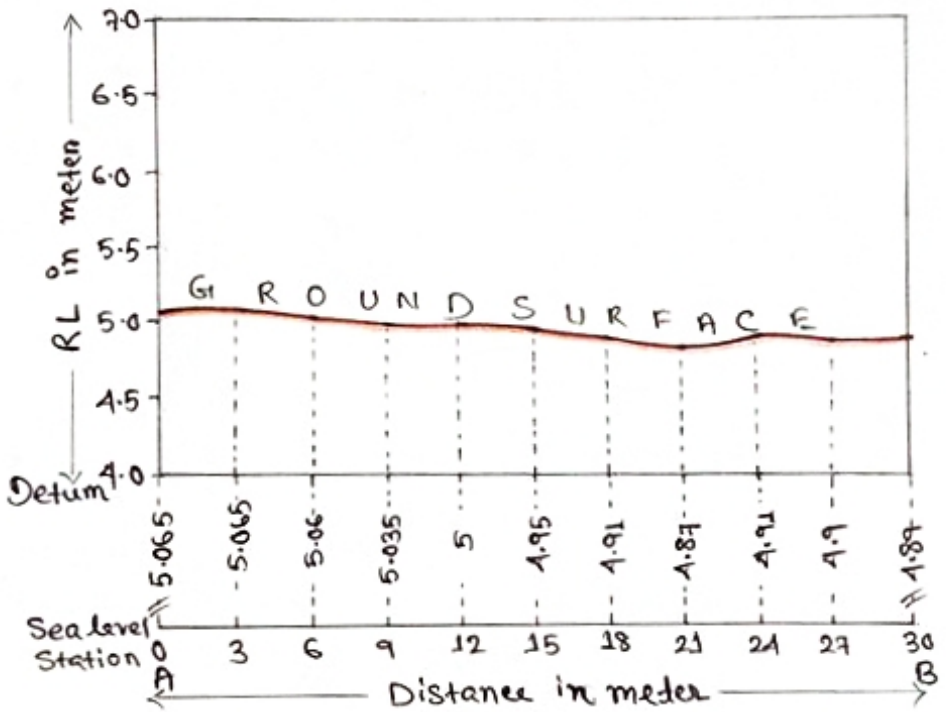
Station	Distance on		Staff reading in m			Height of Collimation	Reduced Level in m	Remarks
	Ground in m	Paper in 1 cm = 2 m	B.S	I.S	F.S			
A	0	0	1.245			6.31	5.065	
A_1	3	1.5		1.245		6.31	5.065	
A_2	6	3		1.250		6.31	5.06	
A_3	9	4.5		1.275		6.31	5.035	BM = 5 mt
A_4	12	6	1.285		1.310	6.31 6.285	5	C.P at A_4 Section
A_5	15	7.5		1.335		6.285	4.95	
A_6	18	9		1.375		6.285	4.91	
A_7	21	10.5		1.410		6.285	4.9	
A_8	24	12		1.375		6.285	4.91	
A_9	27	13.5		1.385		6.285	4.9	
B	30	15			1.395	6.285	4.89	
			Σ2.53		Σ2.705			

Arithmetic Check = ΣB.S - ΣF.S = ΣLast RL - ΣFirst RL

or, = 2.53 - 2.705 = 4.89 - 5.065

or, = -0.175 = -0.175

LEVELLING SURVEY ALONG THE LINE AB BY DUMPY LEVEL



SCALE:

Vertical Scale - 1 cm = 0.5 m

Horizontal Scale - 1 cm = 3 m

- CALCULATION TABLE FOR CONTOURING.....

Place : GOLPATA FOREST, TAKI GPS NO : 2

Station	Distance on Ground in m	Distance on Paper in cm (1 cm = 2 m)	Staff reading in m B.S	I.S	F.S	Height of Collimation	Reduced Level in m	Remarks
O								OA = 60°
A_1	2	1	1.295			6.295	5	
A_2	4	2		1.235		6.295	5.06	
A_3	6	3		1.265		6.295	5.03	
A_4	8	4		1.265		6.295	5.03	
A_5	10	5		1.275		6.295	5.02	BM = 5mt
A_6	12	6		1.265		6.295	5.03	
A_7	14	7		1.265		6.295	5.03	
B_1	2	1		1.250		6.295	5.04	OB = 86°5'
B_2	4	2		1.215		6.295	5.08	
B_3	6	3		1.255		6.295	5.04	
B_4	8	4		1.250		6.295	5.04	
B_5	10	5		1.235		6.295	5.06	
B_6	12	6		1.235		6.295	5.06	
B_7	14	7		1.250		6.295	5.04	
C_1	2	1		1.260		6.295	5.035	OC = 46°
C_2	4	2		1.260		6.295	5.035	
C_3	6	3		1.265		6.295	5.03	
C_4	8	4		1.255		6.295	5.04	
C_5	10	5		1.265		6.295	5.03	
C_6	12	6		1.265		6.295	5.03	
C_7	14	7			1.270	6.295	5.025	

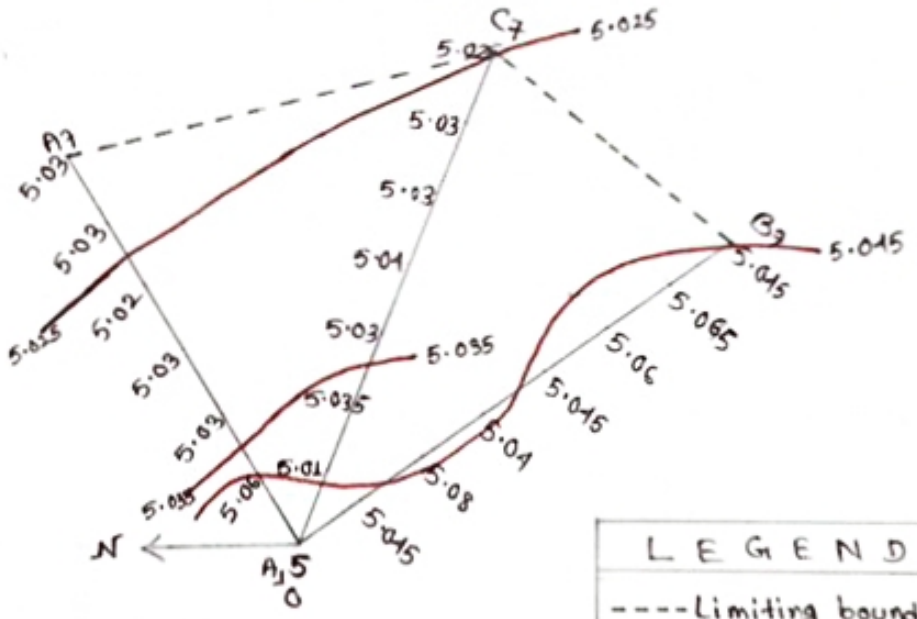
Arithmetic Check : $\Sigma B.S - \Sigma F.S = \Sigma$ Last R.L $- \Sigma$ First R.L

or, $1.295 - 1.270 = 5.025 - 5$

or, $0.025 = 0.025$

CONTOUR PLAN OF AN AREA

TRAVERSED BY THREE RADIATING LINES



Scale :
1 cm = 2 m

LEGENDS

----Limiting boundary of the traverse

Contour interval – 0.010

Contour drawn – 5.025m, 5.035m, 5.045 m

- CALCULATION TABLE FOR PIE GRAPH OF CASTE STRUCTURE...

AREA	NO OF WARD	NO OF CASTE				TOTAL NO OF CASTE	RADIUS OF PIE. $r = \sqrt{\frac{T}{\pi}}$	r in Scale 1 cm to 3 units
		GEN	SC	ST	OBC			
Taki	Ward 5	30	11	4	6	51	4.02	1.34

- CALCULATION TABLE FOR ANGLE IN DEGREE (0°)...

AREA	NO OF WARD	NO OF CASTE IN (0°)				REMARKS
		GEN	SC	ST	OBC	
Taki	5	211°45'	77°38'	28°13'	42°20'	360°

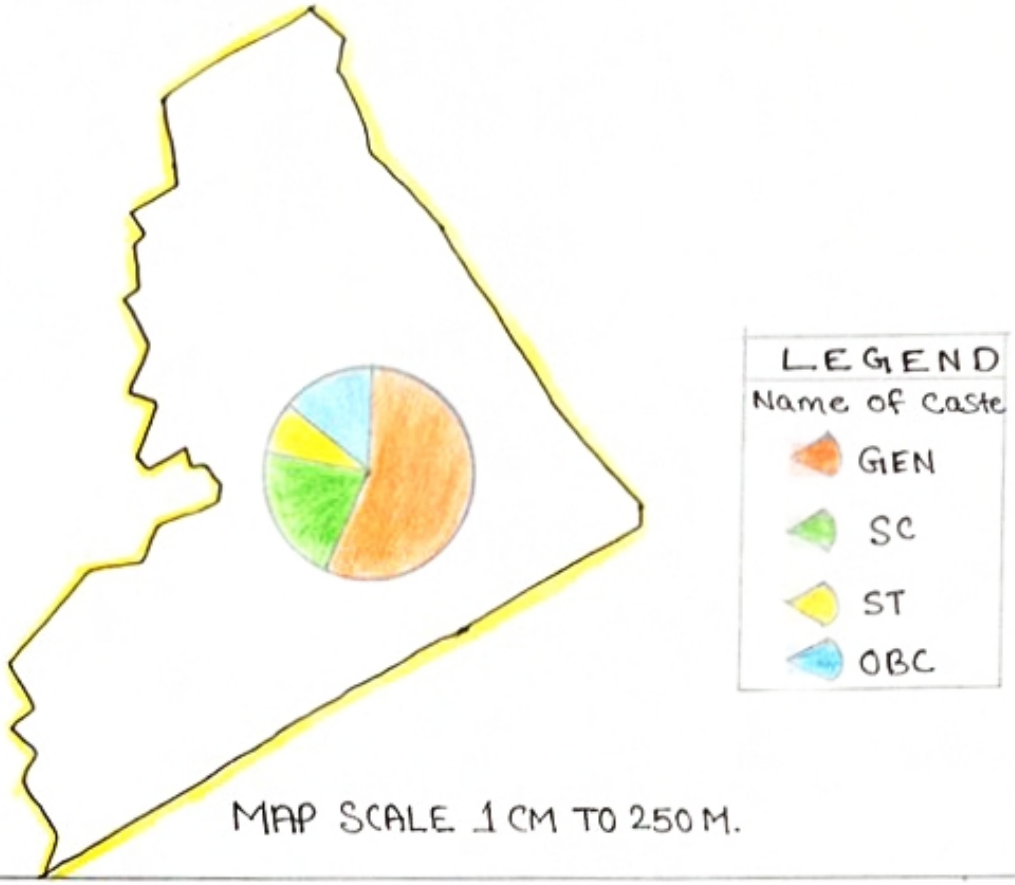
- CALCULATION TABLE FOR PIE GRAPH OF RELIGION

AREA	NO OF WARD	NO OF RELIGION			TOTAL NO OF RELIGION	RADIUS OF PIE $r = \sqrt{\frac{T}{\pi}}$	r in Scale 1 cm to 3 unit
		HINDU	MUSLIM	OTHERS			
Taki	5	51	17	—	68	4.65	1.55

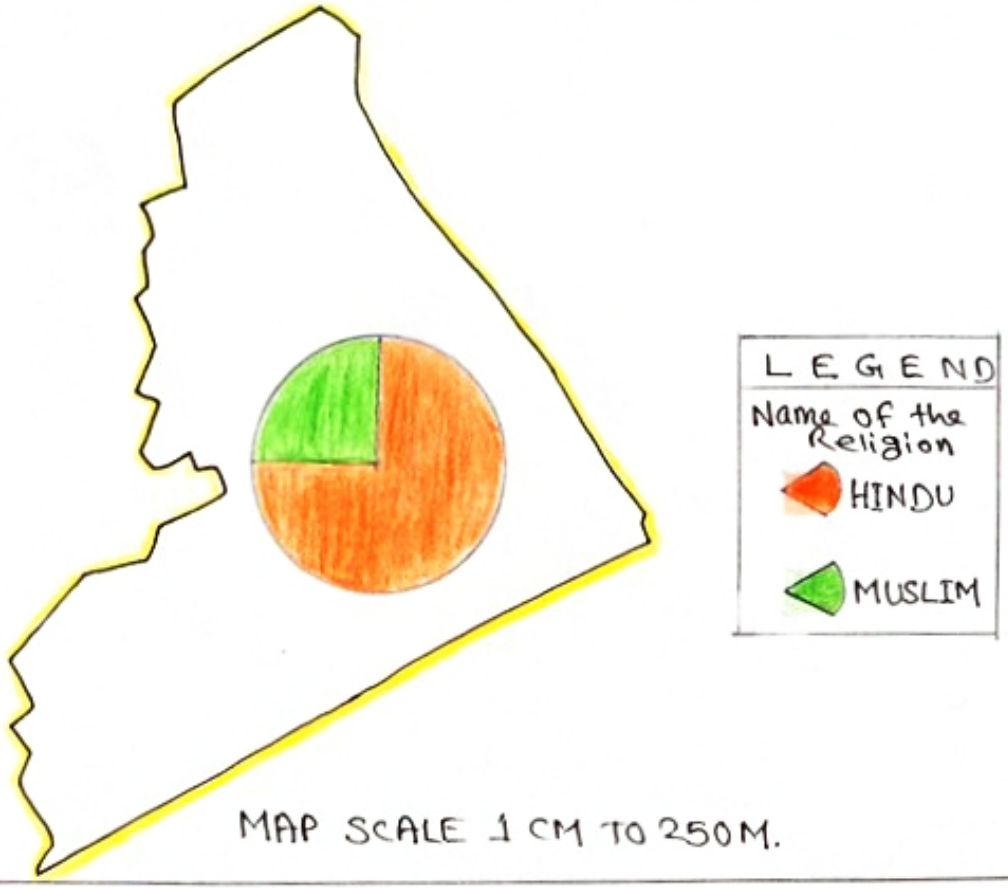
- CALCULATION TABLE FOR ANGLE IN DEGREE (0°)...

AREA	NO OF WARD	NO OF RELIGION IN (0°)			REMARKS
		HINDU	MUSLIM	OTHERS	
Taki	5	270°0'	90°0'	—	360°

PROPORTIONAL DIVIDED CIRCLE
SHOWING
THE CASTE STRUCTURE OF WARD 5, TAKI MUNICIPALITY



PROPORTIONAL DIVIDED CIRCLE
SHOWING
THE RELIGION OF WARD 5, TAKI MUNICIPALITY



- CALCULATION TABLE FOR PIE GRAPH..... NO OF OCCUPATION ..

NAME OF THE AREA	NO OF WARD	NO OF OCCUPATION					TOTAL	RADIUS OF PIE $r = \sqrt{\frac{T}{\pi}}$	r IN SCALE 1 CM TO 3 UNITS
		AGIRI.	SERVICE	INDUSTRY	OTHERS	SHOPS			
Taki	5	3	12	3	31	11	60	4.37	1.45

- CALCULATION TABLE FOR ANGLE IN DEGREE (°) .....

NAME OF THE AREA	NO OF WAR	NO OF OCCUPATION IN DEGREE(°)					REMARKS
		AGRI	SERVICE	INDUSTRY	OTHERS	SHOPS	
Taki	5	18°0'0"	72°0'0"	18°0'0"	186°0'0"	66°0'0"	360°

- CALCULATION TABLE FOR BAR GRAPH..... NO OF MALE LITERATE....

NAME OF THE AREA	NO OF WARD	NO OF THE MALE LITERATE		SCALE 1 CM TO 9 UNITS	
		0-2	2-4	0-2	2-4
Taki	5	45	8	5	0.88

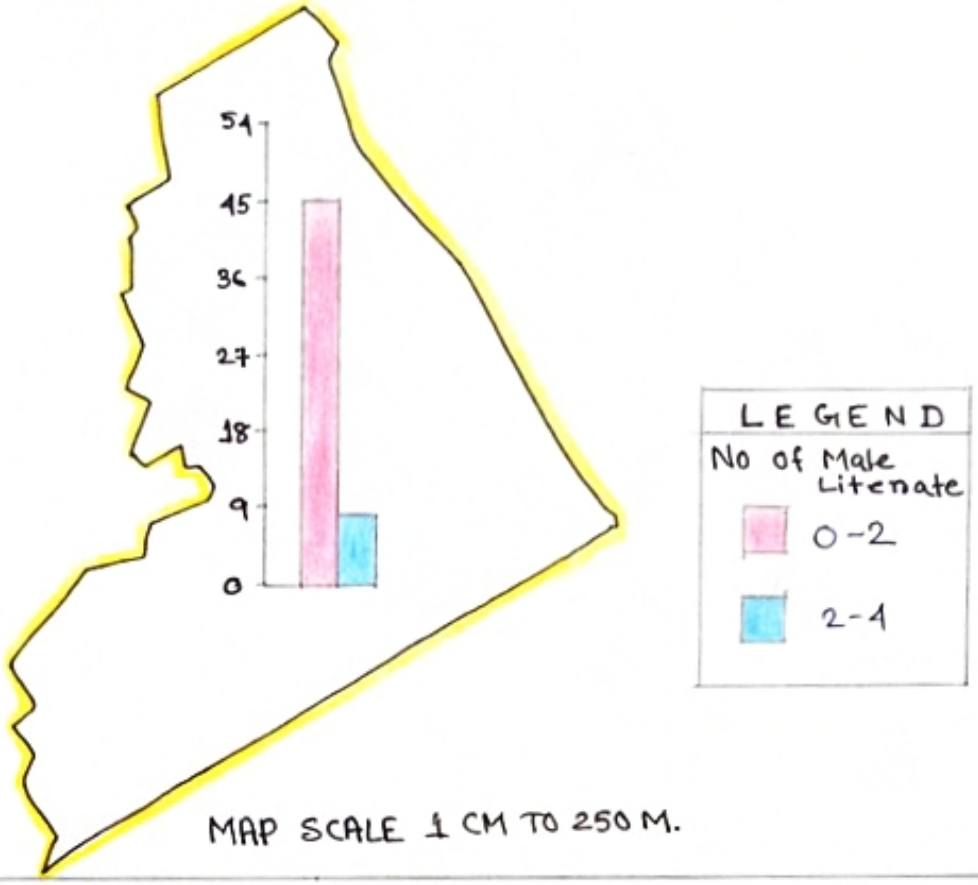
- CALCULATION TABLE FOR BAR GRAPH ... NO OF FEMALE LITERATE..

NAME OF THE AREA	NO OF WARD	NO OF FEMALE LITERATE		SCALE 1 CM TO 9 UNITS	
		0-2	2-4	0-2	2-4
Taki	5	42	4	4.66	0.09

- CALCULATION TABLE FOR AGE-SEX PYRAMID.....

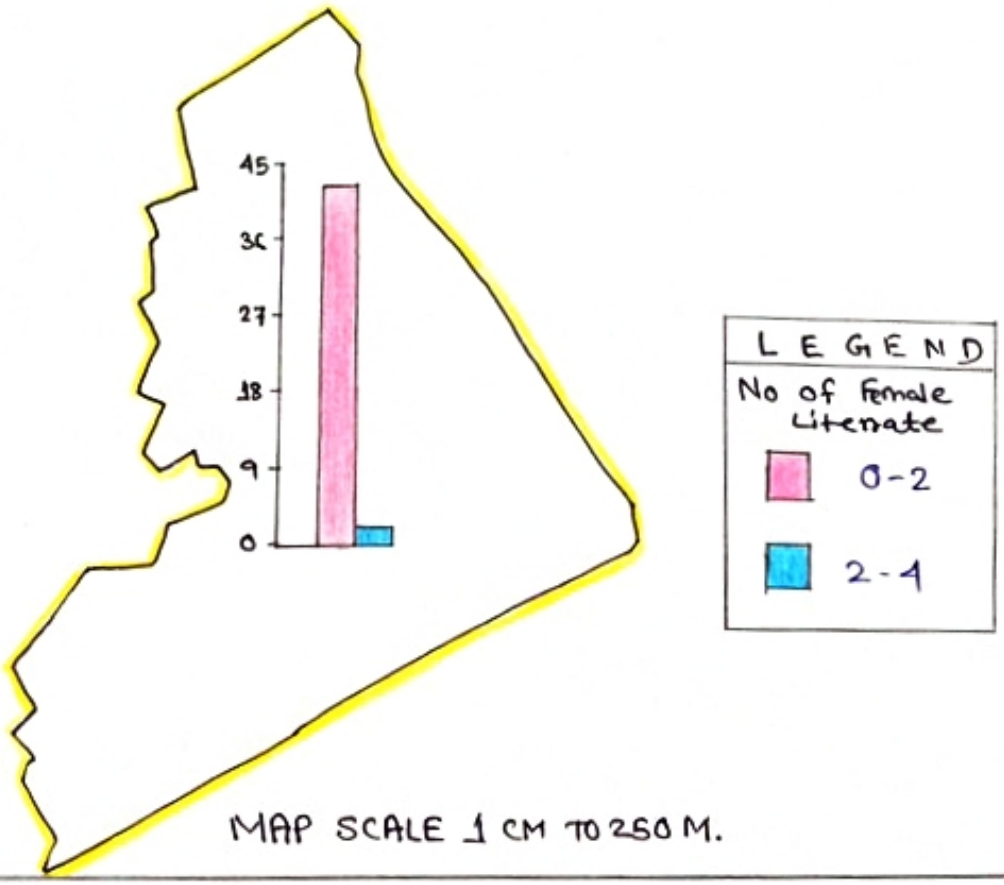
AGE CLASS (YEAR)	MALE	SCALE 1 CM TO 10 POP.	FEMALE	SCALE 1 CM TO 10 POP.
Children (0-18)	51	5.1	44	4.4
Adult (18-60)	57	5.7	56	5.6
Old (60+)	28	2.8	28	2.8

BAR GRAPH
SHOWING
THE MALE LITERATE OF WARD 5, TAKI MUNICIPALITY



MAP SCALE 1 CM TO 250 M.

BAR GRAPH
SHOWING
THE FEMALE LITERATE OF WARD 5, TAKI MUNICIPALITY

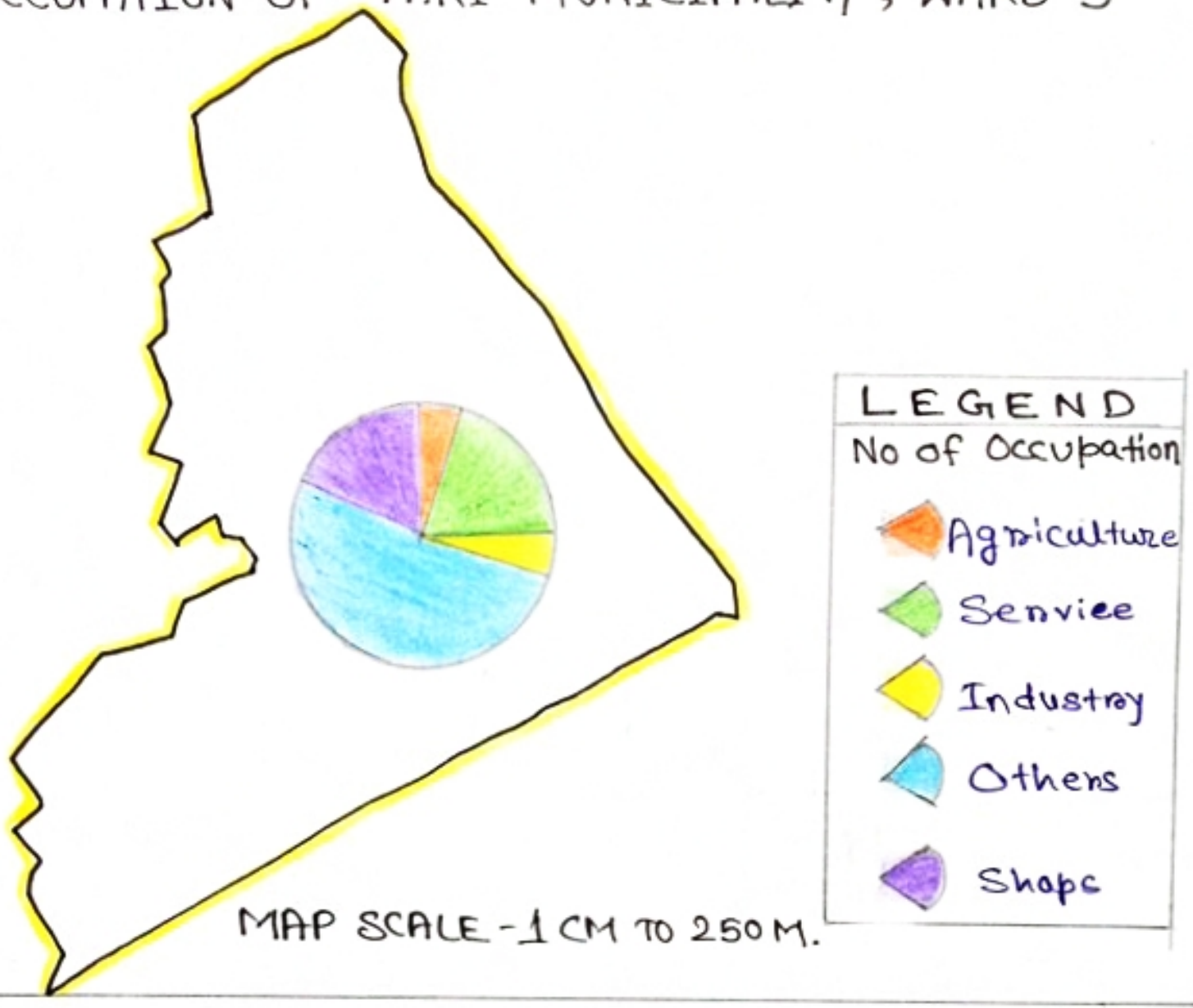


MAP SCALE 1 CM TO 250 M.

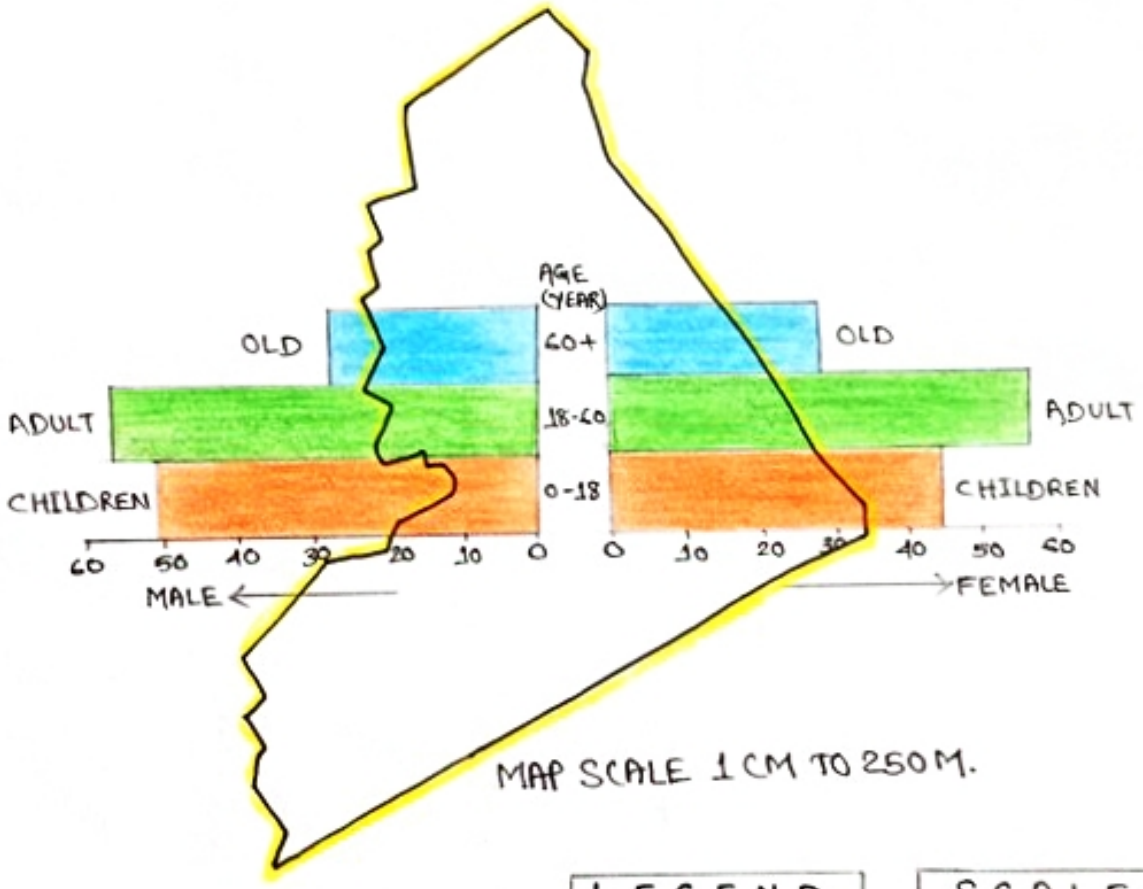
PROPORTIONAL DIVIDED CIRCLE

SHOWING

THE TYPES OF OCCUPATION OF TAKI MUNICIPALITY, WARD 5



AGE-SEX PYRAMID
SHOWING
AGE CLASS OF WARD 5, TAKI MUNICIPALITY



LEGEND
AGE-SEX RATIO
CHILDREN
ADULT
OLD

SCALE
HORIZONTAL SCALE - 1 CM = 10 POP.

- CALCULATION TABLE FOR STAR DIAGRAM....

NAME OF THE AREA	NO OF WARD	AVERAGE MONTHLY INCOME (RS)				
		1000	1000 - 2500	2500 - 5000	5000 - 10,000	> 10000
Taki	5	0	7	14	22	24

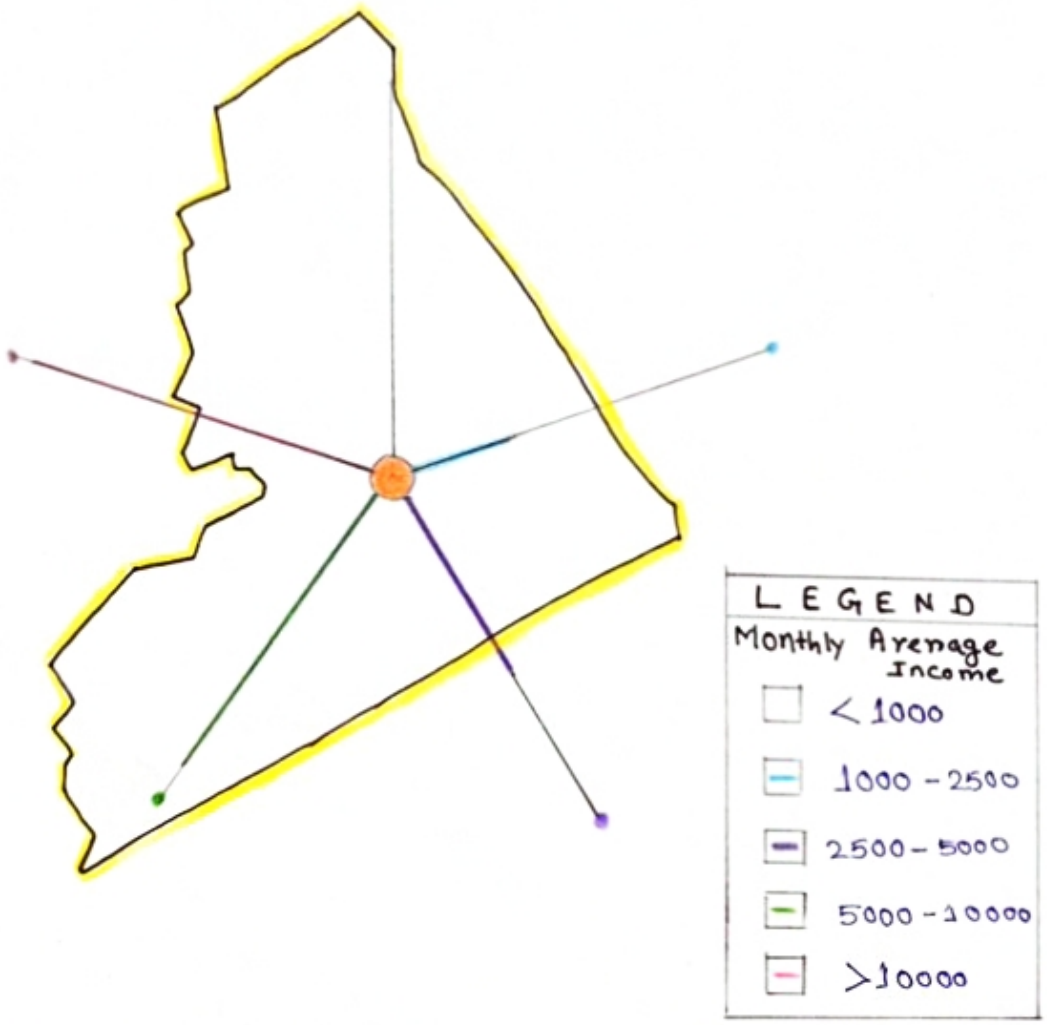
SCALE 1 CM TO 5 UNIT 1000	1000 - 2500	2500 - 5000	5000 - 10,000	> 10000
0	1.4	2.8	4.4	4.8

- CALCULATION TABLE FOR SETTLEMENT STATUS....

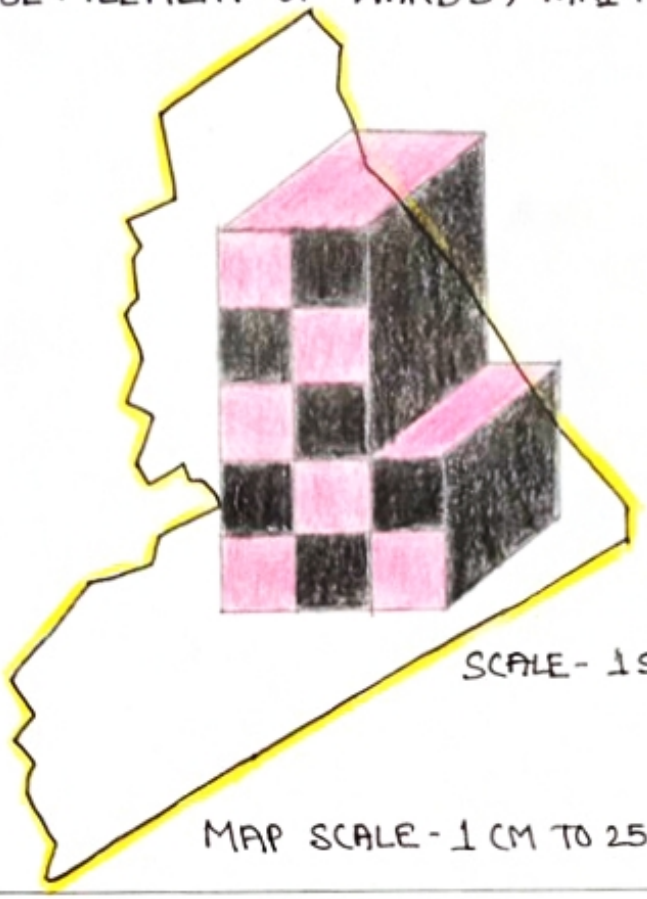
BOX DIAGRAM

NAME OF THE AREA	NO OF THE WA-RD	SETTLEMENT STATUS		PERMANENT SETTLEMENT SCALE 1 sq CM = 10 SETTLEMENT	TEMPORARY SETTLEMENT SCALE 1 sq CM = 5 SETTLEMENT
		PERMANENT	TEMPORARY		
TAKI	WARD 5	60	10	6	2

STAR DIAGRAM
SHOWING
THE MONTHLY AVERAGE INCOME OF WARD 5, TAKI



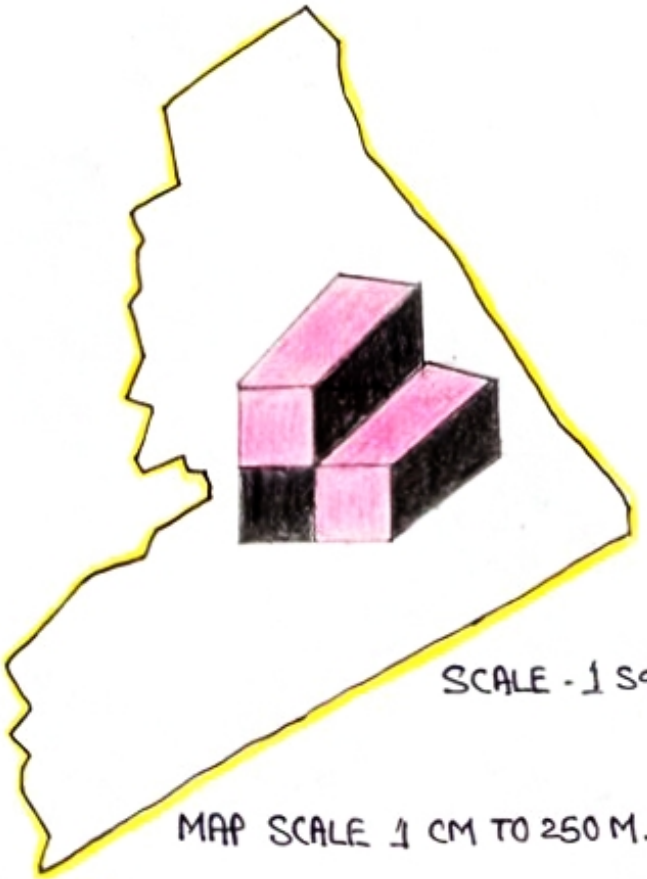
BOX DIAGRAM
SHOWING
THE PERMANENT SETTLEMENT OF WARD 5, TAKI MUNICIPALITY



SCALE - 1 Sq.CM = 10 SETTLEMENT

MAP SCALE - 1 CM TO 250 M.

BOX DIAGRAM
SHOWING
THE TEMPORARY SETTLEMENT OF WARD 5, TAKI MUNICIPALITY



SCALE - 1 Sq.CM = 5 SETTLEMENT

MAP SCALE 1 CM TO 250 M.

SPECIAL FEATURE OF TAKI MUNICIPALITY

THE HISTORY :

Taki possibly started as a simple village settlement in the 15th century and it stands on the river of Ichhamati at the border of India - Bangladesh and it is the gateway of Sundarban. It is very old town and many unknown history was hushed up under the activity of Ichhamati River.

The history over the social name of Taki believed to have been originated long long ago from the name of Big Sand land, locally called TAK, which was created by another river then flowing along with the river Ichhamati but subsequently lost its existence with time. From this particular word, the name "Taki" has come to the people.

YEAR OF ESTABLISHMENT & FORMATION OF TAKI MUNICIPALITY :

Taki town in the Barasat sub-division, situated on the Bank of Jamuna or Ichhamati River at the border of Bangladesh on the Eastern boundary of the district and the farthest end of North-24 Pgs. The Municipality was established on 1st of April 1869. Six mouzas namely Beokanti, Jalapur, Saidpur, Taki, Thuba, Laskar nagar were within the municipalities at that time. At the time of establishment there were 9 commissionner. Its population in 1911 was 5,202. It forms a municipality with an area of 2sq miles divied into four parts, 1) South Taki, 2) North Taki, 3) Saidpur, 4) Beokanti and Jalapur. Initially the Taki municipality was partically nothing more than a collection of villages. Growth population has been visibly increased over the last ten years or so. At the time of the Bangladesh liberation in 1971, the influx of refugees over the last ten years or Bangladesh took shelter in this town and susequently many people migrated in this area from that country. The decodal growth population is around 20%. At present, there are sixteen wards under Taki municipality.

As per last Census, the population is 37,305 which is at pre-Sent about 37941.

ADMINISTRATIVE BOUNDARIES : Taki situated at 22°35'01" of N. latitude and 88°56'09" of East longitude. Ichhamati River exists on the Eastern and Northern boundary of this town. Amlani panchyat is situated at the western boundary and Has-nabad Panchyat at the southern boundary.

LINKAGE OF RAIL, ROAD, PORT AND AIR : Eastern Railways have two railway stations namely Taki Road and Hasnabad within this Municipality. There is one important bus stand in the business centre of Taki namely Hasnabad and apart from this there are four Schedule bus swtops with Comfortable shelter for the commuters within the municipal boundary. Historical Taki road which connects this town with sub divisional town Basir-hat and district town Banasat. It is about 75 km from Kolkata by rail and nearly 100 km by road Nearest airport is at Dum Dum and river port is at Kolkata and both are connected with Taki by road.

HERITAGE : Taki is an old town with along glorious history of education and trade centre for agro and aquatic products. It is rich with haritage buildings like old temples and the famose Taki Jamindar's house locally called as Taki Rajbari. The original temple of Kuler kalibari has been washed out by erosion of River Ichhamati and new temple has been constru-cted. The Jamindar's house is also at delapidated Condition with half of it in the river Ichhamati already. None of the haritage building have been taken over by the Govt. of India for maintainee Municipality process to declare the Rajbari and the temple as heritage property and a token funds have been alloted in the DDP for maintenance

Proposes to approach different sources like state Govt, Govt. of India and other concerned organization to help conserving the historical heritage structure.

ECONOMIC BASE INCLUDING MAJOR ESTABLISHMENTS:

Taki is traditional centre for business in agro and aquatic products. Recently construction components like bricks wood products, fittings etc. Have come up because of construction boom in and around the town. The quality of brick is good as it usage the sediment from the river Ichhamati. Being sand which between two river namely Ichhamati and Kalakhal and several bheries around it has become a trade centre for aquatic products. Apart form his service sector in the town provide for considerable environment. Apart from the municipal inpur in the infrastructure works substantial portion of Infrastructure works substantial portion of Infrastructure spending is still financed by governments or public utilites such as Municipal Affairs Department District Magistrate office, West Bengal State Electricity Board public works Department ; etc by utilizing their own resources.

The other service providers are various commercial banks, post and telecommunication offices, hospitals and healthcare facilities including charitable dispensaries, medicine shops, provision of suppy of dairy milk, rationing office, ration shops, grocery shops, shops for other essential commodities and product, police out posts, amusement facilities, and hotels & so on. The local vms rickshaws. The private bus plying in the route DN-18, R1-252 from Kolkata to Hasnabad via taki is the principle road communication availed by the people apart from the communication by railways.

DEMOGRAPHIC GROWTH AND POPULATION PROJECTION :-

According to past census report, the demographic growth in Taki is shown in Table. - 1.2 below

TABLE-1.1 : DEMOGRAPHIC DATA FOR TAKI MUNICIPALITY

Year	Population	Area (Sq.km)	Density (Pop/Sq.Km)	% Growth 81-91			
				Taki	KMC	West Bengal	India
2001	37.305	12.965	2877	19.30	20.45	21.77	23.52
2011	38263						
2021	-						

Most of the people surveyed were observed to be Hindus and of general caste. Most were engaged in occupation other than agriculture. Most of the families have family members within 5, 2 members are earning members in most of the families, female adults and famale literates are lesses in number as compared to male adults & male literates in most of the families. Number of male workers is more, Male children are also more in number than female children, Though most families have average monthly income more than Rs. 10,000.

PLACES OF INTEREST :

Number of places of interest are situated in Taki and the same attracts a huge number of local tourists. The scenic beauty of River Ichamati has opened up an avenue for local ecomy & a no. of guest houses are running on the bank of the river. Apart from this they also visit to see the Kuler Kalibari, Nandadulalar Mandir, Jana Mandir, Taki Govt. College. Taki dist. Library, Taki Girls' School, Jamindar's house and the green beauty of the area of Bangladesh standing on the opposite bank of the river Ichhamati in the East.

FESTIVALS :

Bengal is a place of festivals — almost in all the months there are some activities to celebrate. However, the major festival in Taki is the immersion of the Goddess Durga at the river Ichhamati where the people of both the countries - India and Bangladesh take part on the occassion within their respective international boundary. They makes the occasion a very vibrant, colonful and enjoyable. Book Fair, Taki Mela, Basirhat Mela, Yuva Mela, Natya Mela & extremely popular yatra pala etc.

TRADITIONAL ARTS / CRAFTS :

The factory of iron fittings, making of burned bricks, boni-papad making at domestic level, date-juice processing & cake making of wooden furniture, blacksmithing, Chana making from cow milk, are some of the prominent activities of the people in the area of traditional arts & crafts in Taki ULB.

CLIMATIC DATA :⇒

Taki Municipality is located on the bank of river Ichhamati. Its climate is very much influenced by the sea. The Municipality has a very tropical saranna type of climate, same as Kolkata and is dominated by 3 seasons — summer, monsoon and winter. The summer is hot and humid and continues from April to June, Summer is dominated by strong southwesterly monsoon winds. Monsoon arrives in mid June and stays up to September. Winter is the most pleasant time and lasts for 3 months — December, January and February. Early morning mist are common in winter. The annual mean temperature varies from 30° to 15°c. The temperature does not fall below 15°c maximum rainfall occurs during the monsoon from the mid of July to August and the annual rainfall is about 1660 mm. Total duration of sunshine is 2528 hours per annum.

TABLE : MONTHLY AVERAGE RAINFALL DISTRIBUTION

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Rainfall (in mm)	2.1	11.9	46.6	60.9	118	255	326	320	262	216	34	4.6

SOIL AND GROUND WATER SCENARIO :

SOIL :-

In Taki Municipality the total area 12.965 sq km (Prestly reduced by river erosion) is divided into 16 wards falling into 6 Mouzas. The Soil is alluvial and congenial to support the growth of agriculture out of 12.965 sq km is used for agriculture and the rest is used for non-agricultural activity like residential, Industrial Commercial, Institutional business place etc.

The farmers use to harvest two major crops anually. The land is built up with river deposition and is very fertile. Depending upon the Soil and Climatic variations, this ULB is fallen into deltaic region of Ichhamati River.

Soils of this area are mostly neutral in reaction. Upland Soil are lighter in texture and contain higher proportions of fine sand and Silt, which helps water recharge. Here the groundwater potential is very high and the aquifer character is mostly unconfined. The region is suitable for cultivation of all kinds of field and horticulture crops.

The Soil erosion of the bank of river Ichhamati is a Serious problem in Taki Municipality. To prevent the Soil erosion a river front development programme has been envisaged through Irrigation and PWD Dept.... Govt. of WB.

SL. NO	SOIL SAMPLE ID	GPS WAYPOINT ID	pH	SALINITY (%)
1	Sample 1	21	6.1	0.1
2	Sample 2	24	6.0	0.1
3	Sample 3	28	6.2	0.3
4	Sample 4	31	6.1	0.2
5	Sample 5	35	6.2	0.3
6	Sample 6	38	6.0	0.1

Soil: 6 Soil Samples were collected from mini Sundarban (Golpata forest) near the bank of river Ichhamati. The soil samples were crushed and dried in the oven (at 110°c for 24 hours) separating the roots and other residues. The soil solutions were prepared (1:10 ratio with distilled water) and refractometer were used to measure the pH and Salinity respectively. All 6 Samples reconded Slightly acidic nature and low salinity. The values are listed in the table.

GROUND WATER :⇒

Ground water is the main source of water supply and distribution system in the Taki Municipality. The water is extracted by 4 nos of deep tube well from the aquifer at a higher depth by the PHED to manage this water supply system. This is not adequate to meet the demand of the entire population of the Municipality. In addition to availing of 629 nos of hand tube wells are used by the people to meet their need. The depth of these hand tube wells taping the water from the aquifer varies from 36 mtr – 54 mtr below ground level. The quality of ground water is not good and contains dissolved harmful contaminants like arsenic, iron and chlorides (for details, see Annex....) beyond permissible limit. The present scenario of this water quality in all the 16 nos of ward is presented as below

CHARACTERISTICS OF GROUND WATER OF TAKI

Ward no	Arsenic (mg/l)	Iron (mg/l)	Chloride (mg/l)
1	0.206	2.2485	407.5
2	0.065	2.28	
3	0.12	2.32	
4	0.091	3.956	247.5
5	0.026	1.0235	958.5
6	0.024	0.91	115
7	0.1625	4.265	212.5
8	0.0835	1.696	426
9	0.0055	0.922	355
10	0.014	0.8045	213
11	0.08	1.9785	1082
12	0.113	1.922	425.5
13	0	0.7935	185.5
14	0.078	1.3945	266
15	0.045	0.73	2056
16	0.093	1.2655	904.5

GEOMORPHOLOGY AND HYDROGEOLOGY :

GEOMORPHOLOGY :⇒

The district of North 24 Parganas is part of the Bengal Basin. The district is divided into three geographic units :

i. Natural Levee areas
ii. Swamp areas
iii. Older flood plains

The district is a part of the lower delta plain of Bengal Basin which is the largest fluvio-deltaic sedimentary system on earth — the Ganga - Brahmaputra delta. The delta can be divied into two regions :

A. The upper delta plain of meander belts of the Padma - Bhaginathi rivers in the North ;

B. The lower delta plain with several tidal creeks in the South

The upper delta plain is characterized by a series of meander scars of various wavelengths and amplitudes, abandoned channels and oxbow lakes formed under varying hydrodynamic conditions in a fluvial regime.

The lower deltaic plain consists of tidal mudflats, distributaries levees and inter distributary marsh complex formed under a fluvial - estuarine — marine environment under the influence of fluctuating sea level conditions in geologically recent times (Pleistocene - Holocene).

GEOLOGY :⇒

The district is a part of lower Gangetic basin and is underlain by huge thickness of quaternary alluvium.

Older alluvium Sediments occurs beneath recent alluvium and comprises gray to brown sand fine to coarse grained gravel, clay with kankar and fennuginous concretion. In the northern and central part of the district top surface clay is co occurring down to 5 to 12 mbgl, whereas in southern and South-eastern parts of the district average thickness of top clay layer is up to 25 mbgl.

GROUND WATER POTENTIAL AND HYDROGEOLOGY :⇒

Groundwater occurs in a thick zone of saturation in the alluvium deposited by the river system. The sand and gravel horizons of different textures consitute main aquifers. Report on the hydrogeology of the area suggests that there shallow aquifer in the upper delta plain and is mostly under unconfined conditions except near its northern and Central part of the district occur under water.

In the southern and south-eastern part of the district comprising Hasnabad, blocks groundwater occurs under confined condition. These blocks are found to be affected by a saline groundwater environment, but there is a wide variation in the disposition of fresh and saline groundwater bearing aquifers within the blocks. The saline water bearing aquifers are found to exixt depth span of 150 m - 330 m below ground level. These lower groups of aquifers are effectively speparated by a thick clay bed and exist under confined condition.

Tubewells in the district are constructed tapping both unconfined and confined aquifers and are capable to yield 20 to 150 m3/hr with nominal drawdown of 1-5 m.

RAINFALL : MONTH WISE & CLIMATE CONDITION

DIST.- NORTH 24 PARGANAS
RAINFALL DATA (mm.)

	2020	2019	2018	2017	2016
Jan	36.70	0.00	0.00	0.00	0.70
Feb	4.40	139.70	0.00	0.00	84.40
Mar	83.80	81.60	2.40	44.20	37.80
Apr	115.80	63.20	85.70	5.20	2.50
May	330.50	88.70	162.90	87.60	146
Jun	400.20	98.70	254.00	258.60	225.80
Jul	337.50	208.70	388.10	502.30	427.10
Aug	394	421.60	259.80	257.20	473.40
Sep	162.70	322.70	169.70	238.40	135
Oct	51.90	204.70	67.50	288.50	111.30
Nov	16.80	98.200	0.00	39.00	30.70
Dec	0.00	9.50	12.50	28.80	0.00

Source: Indian Meteorological Department, Nagpur

The Indian Meteorological Department, Nagpur, vide letter No. Nagpur RMC/CS-312, dated 18th January, 2016 has provided the period of Rainy Season viz. Normal dates of onset and Withdrawal of South West Monsoon over India as state-wise. The duration for the period is 10th June to 15th October.

The annual precipitation of the district is around 1661.1 mm, while the temperate varies throughout the year is 33.2°c to 19°c with relative annual humidity of 72% to 83%.

INTERPRETATIONS :⇒

Most of the people surveyed have reported that they have been permanent settlers of Taki. The people who had migrated from other places to Taki, mostly had arrived 10 years ago.

↳ Most of the people (n=22) have opined that fruit trees had become extinct. 19 people reported that embankments have breached 3 times. Most of the people have not lost agricultural lands & occupation but some were forced to change their occupation. The new occupation has turned profitable for them. An approximate equal share of shallow & deep tubewells have been reported by local people. No major health problem was found. Some residents opined that they face sewage problems. The major crisis is that of arsenic contamination saline drinking water. Nearest school, college, hospital at are within 1 km. Police station is located within 5 km.

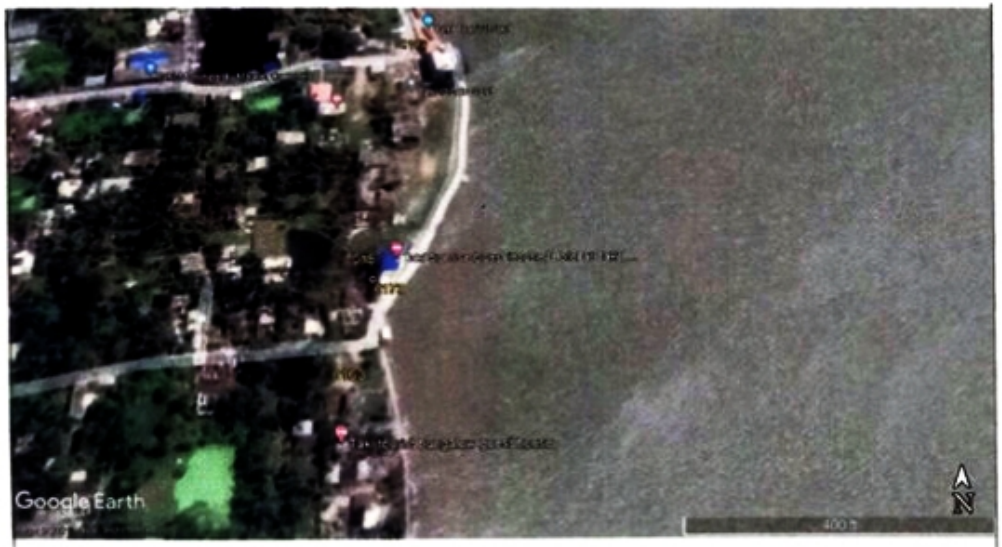
↳ Responses of the local people regarding level of satisfaction with present condition, environmental problems and hazard alleviation measures were ranked on a 4 point likert scale ranging from 0 to 1.

↳ Most of the people are seen to be fully satisfied with the state of fluvial embankment. Mostly neutral response was found in case of change in land use pattern, change in property price recorded equal share of fully unsatisfied, satisfied and fully satisfied responses. Most of the people are fully unsatisfied with change in occupation.

↳ Environmental problems of fluvial erosion, saltwater incursion and tropical cyclones are observed mostly. People have emphasized on fluvial embankments (both earthen and brick paved) as hazard alleviation measures.

GPS WAYPOINT FOR SOIL SAMPLE COLLECTION AND CONTOURING IN GOLPATA FOREST (MINI SUNDARBAN) TAKI.

GPS WAYPOINT FOR DUMPY LEVEL SURVEY ALONG THE ROAD TO TAKI GOVERNMENT COLLEGE



GPS WAYPOINT FOR MARKET SURVEY

GPS WAYPOINT FOR QUESTIONNAIRE SURVEY, GUEST HOUSE SURVEY

SURVEY OF MARKET

DUMPY LEVEL

SOIL SAMPLING

CONTOURING USING DUMPY LEVEL

SURVEY OF GUEST HOUSE

SOIL SALINITY TESTING

SUNDARI & GOLPATA TREE

TAKI GOVERNMENT COLLEGE

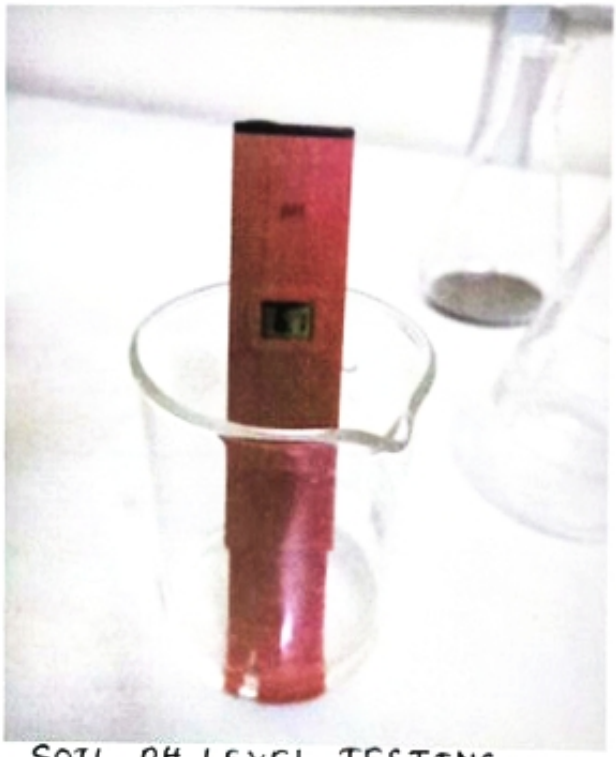
GROUP PHOTO

SURVEY OF HOUSE

TAKI POST & TELEGRAPH OFFICE

SEPARATING THE ROOTS FROM SOIL

TAKI GOVERNMENT COLLEGE



SOIL PH LEVEL TESTING

SURVEY OF PRISMATIC COMPASS