7.1.4 Water conservation facilities available in the Institution

1. ***Rainwater harvesting.***
2. ***Bore well /Open well recharge.***
3. ***Construction of tanks and bunds.***
4. ***Wastewater recycling.***
5. ***Maintenance of water bodies and distribution system in the campus.***

HEI Input: 4 or All the Above

Table of Contents

Indore Institute of Science and Technology IQAC INDORE

Indore Institute of Science & Technology INDORE

Water Conservation facilities available at IIST

The following Water Conservation Facilities are available in the Institute.

1. Rainwater harvesting
2. Borewell /Open well recharge
3. Construction of tanks and bunds
4. Maintenance of water bodies and distribution system in the campus

Consultancy Service bill for rainwater harvesting.

25/09/18
JV.53

BSR

7-C Vandana Nagar Main Road , Indore 452018
Mob No: 09827211395 , Phone No. 0731 2497610

BHOOJAL SURVEY & RECHARGING

IIST College
RAU Pithampur Road
Indore

Date: 10/09/18

OUR GSTIN: 23ABTPJ0621L1ZN

QUOTATION

S No.	Item Description	AMOUNT
1	Consultancy Service Charges for Rainwater Harvesting Planning , Calculations and Structure Design .	10,000/-
2	Visit Charges (2 visits)	5,000/-
	TOTAL SGST @ 9% CGST @9%	15,000/- 1,350/- 1,350/-
	GRAND TOTAL	17,700/-

Principal
Indore Institute of Science and Technology, Indore

Rs in words - : Seventeen Thousand Seven Hundred Only.

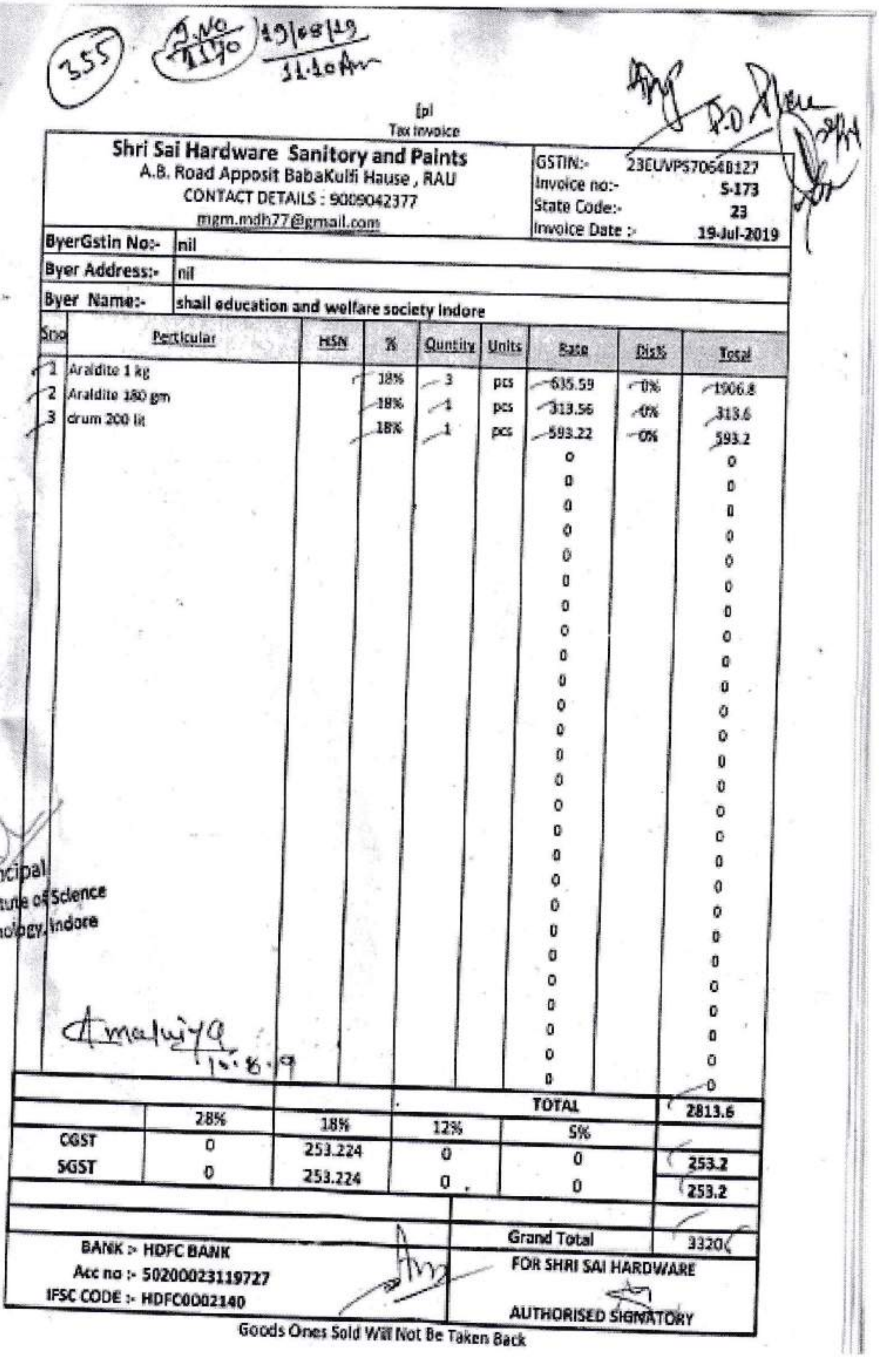
Terms & Conditions:
1.) 100 % advance by cheque along with work order.

For Bhoojal Survey & Recharging

Bank Details:-
Syndicate Bank Kanadiya Road Indore
A/c No. 7803 307 000 2555
IFSC code SYNB 0007803
Beneficiary :- Bhoojal Survey & Recharging

Indore Institute of Science and Technology IQAC INDORE

Indore Institute of Science & Technology INDORE



355 I.No 1190 19/08/19 11.10 Am

P.O

[pl
Tax invoice

Shri Sai Hardware Sanitory and Paints
A.B. Road Apposit BabaKulfi Hause , RAU
CONTACT DETAILS : 9009042377
mgm.mdh77@gmail.com

GSTIN:- 23EUVPS7064B127
Invoice no:- S-173
State Code:- 23
Invoice Date :- 19-Jul-2019

ByerGstin No:-	nil
Byer Address:-	nil
Byer Name:-	shail education and welfare society indore

Sno	Perticular	HSN	%	Quntity	Units	Rate	Dis%	Total
1	Araldite 1 kg		18%	3	pcs	635.59	0%	1906.8
2	Araldite 180 gm		18%	1	pcs	313.56	0%	313.6
3	drum 200 lit		18%	1	pcs	593.22	0%	593.2
						0		0
						0		0
						0		0
						0		0
						0		0
						0		0
						0		0
						0		0
						0		0
						0		0
						0		0
						0		0
						0		0
						0		0
						0		0
						0		0
						0		0
						0		0
						0		0
						0		0
						0		0
						0		0
						0		0
						0		0
						0		0
						0		0

Principal
Institute of Science
and Technology, Indore

Amalviya
19.8.19

	28%	18%	12%	5%	
				TOTAL	2813.6
CGST	0	253.224	0	0	253.2
SGST	0	253.224	0	0	253.2
				Grand Total	3320

BANK :- HDFC BANK
Acc no :- 50200023119727
IFSC CODE :- HDFC0002140

FOR SHRI SAI HARDWARE
AUTHORISED SIGNATORY

Goods Ones Sold Will Not Be Taken Back

LOKENDRA RATHOR

TRANSPOTER OF GITTI & MURAM
60,SUKHANIWAS NEAR CAT ROAD- INDORE (M.93033-99099)

BILL NO. 25 DATE- 01/07/2019

M/S – SHAIL EDUCATION &WELFAR SOCITY –RAU ,

JCB HAYRING BILL

S NO.	PARTICULER	TOTAL HOURS	@	AMOUNT
01	JCB HAYRING 17/6 TO 30/6/19	~~76.55~~ MIN. 75.92 HRS	850/-	~~64218.00~~ 64,532=00
	TOTAL			~~64218.00~~ 64,532=00

~~SIXTY FOUR THOUSEND TWO HUNDRED EIGHTEEN RS.~~

for LOKENDRA RATHOR

Principal
Indore Institute of Science and Technology, Indore

Indore Institute of Science and Technology IQAC INDORE

Indore Institute of Science & Technology INDORE

INDORE INSTITUTE OF SCIENCE & TECHNOLOGY, INDORE

Approved by AICTE, New Delhi, Affiliated to RGPV, Bhopal, Recognized by UGC under section 2(f)

M/S- SHAIL EDUCATION &WELFAR SOCITY-RAU — BILL PR. 17/6 TO 29/6/19

DATE	JCB HAYRING TIME	JCB CLOSING TIME	TOTAL	SITE NAME
17-06-19	12.00PM	1.00 PM	1.00 HOURS	SHAIL EDU.RAU
17-06-19	2.00 PM	3.30 PM	1.30 HOURS	SHAIL EDU.RAU
17-06-19	6.00 PM	6.30 PM	0.30 HOURS	SHAIL EDU.RAU
18-06-19	9.35 AM	12.00 PM	2.25 HOURS	SHAIL EDU.RAU
18-06-19	2.30 PM	6.00 PM	3.30 HOURS	SHAIL EDU.RAU
19-06-19	9.30 AM	1.00 PM	3.30 HOURS	SHAIL EDU.RAU
19-06-19	2.00 PM	6.00 PM	4.00 HOURS	SHAIL EDU.RAU
20-06-19	9.30 AM	11.20 AM	1.50 HOURS	SHAIL EDU.RAU
21-06-19	9.00 AM	1.00 PM	4.00 HOURS	SHAIL EDU.RAU
21-06-19	2.30 PM	6.00 PM	3.30 HOURS	SHAIL EDU.RAU
22-06-19	9.00 AM	1.00 PM	4.00 HOURS	SHAIL EDU.RAU
22-06-19	1.30 PM	6.00 PM	4.30 HOURS	SHAIL EDU.RAU
23-06-19	9.30 AM	1.00 PM	3.30 HOURS	SHAIL EDU.RAU
23-06-19	2.00 PM	5.00 PM	3.00 HOURS	SHAIL EDU.RAU
24-06-19	11.20 AM	1.00 PM	1.40 HOURS	SHAIL EDU.RAU
24-06-19	1.30 PM	6.10 PM	4.40 HOURS	SHAIL EDU.RAU
25-06-19	9.30 AM	5.00 PM	7.00 HOURS	SHAIL EDU.RAU
26-06-19	9.30 AM	1.00 PM	3.30 HOURS	SHAIL EDU.RAU
26-06-19	1.30 PM	5.20 PM	3.50 HOURS	SHAIL EDU.RAU
28-06-19	9.30 AM	1.00 PM	3.30 HOURS	SHAIL EDU.RAU
28-06-19	1.30 PM	6.30 PM	5.00 HOURS	SHAIL EDU.RAU
29-06-19	9.30 AM	1.00 PM	3.30 HOURS	SHAIL EDU.RAU
29-06-19	1.30 PM	4.00 PM	2.30 HOURS	SHAIL EDU.RAU
	TOTAL		75.55 MINT	

75.92 HOURS

(1182) 21/05/19
11.10 Am

351

LOKENDRA RATHOR

TRANSPOTER OF GITTI & MURAM

60,SUKHANIWAS NEAR CAT ROAD- INDORE (M.93033-99099)

BILL NO. 26

DATE- 01/07/2019

M/S – SHAIL EDUCATION &WELFAR SOCITY –RAU ,

S NO.	PARTICULER	QTY	@	AMOUNT
01	MATERIAL 40 MM GITTY	100 M3	600/-	60000.00
	TOTAL			60000.00

SIXTY THOUSEND RS

for LOKENDRA RATHOR

Principal
Indore Institute of Science and Technology, Indore

Indore Institute of Science and Technology IQAC INDORE

Indore Institute of Science & Technology INDORE

Rainwater Harvesting Report

Indore Institute of Science & Technology
www.indoreinstitute.com

Indore Institute of Science & Technology
Affiliated to - RGPV (Bhopal) & Approved by - AICTE (New Delhi)

Rain Water Harvesting Project at Indore Institute of Science and Technology Report (2022-2023)

In the year 2018-2019 IIST started initiative for water harvesting project, that completed in three Phases-

Phase- I - Utilizing Roof water.

Phase – II - Construction of Injection Bore well inside Existing Open Well near Transformer Yard (Generator Room)

Phase - III - Utilizing storm water of existing Nallah.

Phase- I

Projected Collection and Utilization of Roof Water from IIST (ALL Blocks)

Total roof area is 3357 m^2 including 2657 m^2 is considered for ground water recharging through pits

- Roof Area = 2657 m^2

Formula f or calculation of Average Ground Water Recharge -

= (Area X Runoff Factor X Mean annual rainfall) / 1000

Average Ground Water Recharge = (2657 x 0.8 x 941.4) / 1000

= 2001.03 m^3 / year **(Projected)**

DEPARTMENT OF CIVIL ENGG. IIST

Indore Institute of Science and Technology IQAC INDORE

Indore Institute of Science & Technology INDORE

Actual Collection and Utilization of Roof Water from IIST (ALL Blocks)

Rain water harvesting pits size details.

Drain deposits tank of rain water will be made from building away from 3 meters.

S. No.	Building Name	Rain harvesting Water Store Pit Point	Pit Size			Total Area
			L 'm'	W 'm'	H 'm'	'm³'
1.	IIST- Building	a.) A- Block Back Side	3	3	2	18
		b.) B- Block Back Side	3	3	2	18
		c.) C- Block Back Side(Pit-1)	3	3	2	18
		d.) C- Block Back Side(Pit-2)	2	2	2	08

Yearly Rainfall(in mm) trends for Indore for Year 2022

TABLE -1

YEAR	NORMAL RAINFALL (mm)	ACTUAL RAINFALL (mm)
2022	941.4	1133

Table-1 showing the total rainfall occurs at Indore in corresponding years, normal rainfall occurs 941.4mm annually in the city but according to Indian **Water Resources Information** System actual rainfall data is differ, shown as above.

Indore Institute of Science and Technology IQAC INDORE

Indore Institute of Science & Technology INDORE

Total water Harvested at IIST based on above rainfall data

Unit- m^3/Year

Particular	2022
Collecting Roof Water from IIST(Block-A) & Ground water recharge	2408.30

Formula for calculation of Average Ground Water Recharge -

= Area X Runoff Factor X Mean annual rainfall / 1000

Total water Harvested in Year 2022

= (2657 *0.8*1133)/1000

= 2408.30 m^3/Year

Phase-II

Projected Collection of Roof Water from IIST (Block-A) & Harvesting it into Existing Openwell

Total roof area is 3357 m^2, 700 m^2 is considered for ground water recharging through existing open well

Formula for calculation of Average Ground Water Recharge:

= (Area X Runoff Factor X Mean annual rainfall) / 1000

Projected average Ground Water Recharge = 700 x 0.8 x 941.4/1000

= 527.18 m^3/year

Actual Collection of Roof Water from IIST (Block-A) & Harvesting it into Existing Openwell –

Total water Harvested in Open Well at IIST based on above Rainfall data

Unit- m^3/Year

Particular	2022
Collecting Roof Water from IIST(Block-A) & Harvesting it into Existing Open well	634.48

Formula for calculation of Average Ground Water Recharge –

= (Area X Runoff Factor X Mean annual rainfall) / 1000

- **Total water Harvested in Year 2022**

= (700*0.8*1133)/1000

= 634.48 m^3/Year

Phase-III

Projected Collection Runoff Water from Existing Nallah

= (90'x150') =1254 m^2

Formula for calculation of Average Ground Water Recharge -

= (Area X Runoff Factor X Mean annual rainfall) / 1000

Average Ground Water Recharge will be =1254 x 0.4 x 941.4/1000

= 472.206 m^3/year

Indore Institute of Science and Technology IQAC INDORE

Indore Institute of Science & Technology INDORE

Actual Collection Runoff Water from Existing Nallah

Unit- m^3/Year

Particular	2022
Collecting Runoff Water from Existing Nallah	568.31

Total water Harvested in Year 2019

= (1254*0.4*1133)/1000

= 568.31 m^3/Year

Total water Harvested in year 2022 by three phases =

= 2408.30+ 634.48+ 568.31

= 3611.09 m^3/Year

(Project In charge)

Indore Institute of Science and Technology IQAC INDORE

Indore Institute of Science & Technology INDORE

Soil and Water Testing Report

मिट्टी परीक्षण सेवा योजना,
राजमाता विजयाराजे सिंधिया कृषि विश्व विद्यालय,
ग्वालियर।
कृषि महाविद्यालय, इन्दौर

क्रमांक : STS/2020-21 / 32-36

दिनांक 16 | 07 | 2021

नाम :	Indore Institute of Technology (IIST)
पता :	गॉव – तहसील इन्दौर जिला इन्दौर
खेत की पहचान:	R No. 37 Dt.
	Soil / Water Samples collected and supplied by the party

मिट्टी विश्लेषण परिणाम

क्रमांक	पहचान		(pH) (1:2)	(EC) (1:2)	Organic Carbon	Available Nitrogen	Available Phosphorus	Available Potash
				dSm^{-1}	%	kg/ha		
1	Girls Hostel	1/5	7.65	0.90	0.42	184	9.6	440
2	Arhar 1	2/5	7.90	0.63	0.60	240	13.6	560
3	Arhar 2	3/5	7.97	0.49	0.52	204	11.2	480
4	Aonla Field	4/5	7.75	0.22	0.55	218	11.2	520
5	Moong	5/5	7.82	0.42	0.45	190	9.6	480
	तुलना के लिए मध्यम स्तर		6.5-7.50	<0.80	0.50	250-400	>10	400

जॉच कर्ता

हस्ताक्षर
मिट्टी परीक्षण अधिकारी
मिट्टी परीक्षण अधिकारी
कृषि महाविद्यालय, इन्दौर

Principal
Indore Institute of Science and Technology, Indore

Indore Institute of Science and Technology IQAC INDORE

Indore Institute of Science & Technology INDORE

INDORE INSTITUTE OF SCIENCE & TECHNOLOGY, INDORE

Approved by AICTE, New Delhi, Affiliated to RGPV, Bhopal, Recognized by UGC under section 2(f)

Drinking Water Testing Report

CERTIFICATE OF ANALYSIS

CHOKSI LABORATORIES LIMITED

Issued from:
Choksi Laboratories Limited **(Building - 2 "Pasteur")**
Survey No. 9/1, Balaji Tulsiyana Industrial Estate,
Kumedi, Off. M.R. 10 Toll Naka,
Indore - 452010 (M.P.) INDIA

TC-6384

Issued to: INDORE INSTITUTE OF SCIENCE & TECHNOLOGY, INDORE OPP.IIM (INDORE) RAU-PITHAMPUR ROAD, RAU, INDORE , Madhya Pradesh India - 453331	**CoA ID:** 01701432/22-23 **Report No.:** 01701432/22-23 (v1) **ULR No.:** TC638423000000329F **Issue date:** 09-02-2023 **Customer Ref(s):** IIST BUILDING RO WATER **Customer ID:** II210045
Sample Name: DRINKING WATER **Manufacture License No:** N/M **Manufacturer Name:** N/M **Manufacturing Date:** N/M **Reference of Letter:** N/M **Date of Letter:** N/M **Date of Receipt:** 27-01-2023 **Batch Number:** N/M **Batch Size:** N/M **A.R. Number:** N/M **Expiry / Retest Date:** N/M	**Sample Quantity:** 20+1 LITRE **Sealed / Unsealed:** Unsealed **Packing:** PLASTIC CAN + GLASS BOTTLE **Analysis Start Date:** 27-01-2023 **Analysis End Date:** 07-02-2023 **Sampling Date:** N/M **Sampled By:** Client **Sampling Location:** N/M **Page Number:** 1 of 4
Test specification as per IS 10500:2012 (Amendment-4)	

Description :- Clear colorless liquid without suspended particles

Sr.No.	Characteristics	Unit	Result	Specification	MDL	Reference Method	Permissible Limits
Discipline: Chemical Group: Water Subgroup: Drinking Water **Chemical Parameters**							
1.	Colour	Hazen unit	Less than 1	NMT 5	N/M	IS : 3025(Part 4)-1983	NMT 15
2.	Odour	Not Applicable	Agreeable	Agreeable	N/M	IS : 3025(Part 5)-2018	Agreeable
3.	Taste	Not Applicable	Agreeable	Agreeable	N/M	IS : 3025(Part 8)-1984	Agreeable
4.	Turbidity	NTU	0.5	NMT 1	N/M	IS : 3025(Part 10)-1984	NMT 5
5.	Total dissolved solids	mg/L	101	NMT 500	N/M	IS : 3025(Part 16)-1984	NMT 2000
6.	pH value	Not Applicable	7.9	6.5-8.5	N/M	IS : 3025(Part 11)-1983	No relaxation
7.	Total Hardness, as CaCO3	mg/L	39.6	NMT 200	N/M	IS : 3025(Part 21)-2009	NMT 600
8.	Calcium, as Ca	mg/L	6.3	NMT 75	N/M	IS : 3025(Part 40)-1991	NMT 200
9.	Boron, as B	mg/L	Not Detected	NMT 0.5	0.04	Annex H of IS : 13428-2005	NMT 1.0
10.	Chloride, as Cl	mg/L	5.8	NMT 250	N/M	IS : 3025(Part 32)-1988	NMT 1000
11.	Sulphate,as SO4	mg/L	Below Detection Limit	NMT 200	1.0	IS : 3025(Part 24)-1986	NMT 400
12.	Nitrate, as NO3	mg/L	4.1	NMT 45	0.1	IS : 3025(Part 34)-1988	No relaxation

IDR00336
09-02-2023 09:38:33
Authorised Signatory

IDR01250
09-02-2023 10:03:55
QA Approver

This document is electronically generated & does not require any signature.

Indore Institute of Science and Technology IQAC INDORE

Indore Institute of Science & Technology INDORE

CERTIFICATE OF ANALYSIS

CHOKSI LABORATORIES LIMITED

Issued from:
Choksi Laboratories Limited **(Building - 2 "Pasteur")**
Survey No. 9/1, Balaji Tulsiyana Industrial Estate,
Kumedi, Off. M.R. 10 Toll Naka,
Indore - 452010 (M.P.) INDIA

TC-6384

Issued to: INDORE INSTITUTE OF SCIENCE & TECHNOLOGY, INDORE OPP.IIM (INDORE) RAU-PITHAMPUR ROAD, RAU, INDORE , Madhya Pradesh India - 453331	**CoA ID:** 01701432/22-23 **Report No.:** 01701432/22-23 (v1) **ULR No.:** TC63B423000000329F **Issue date:** 09-02-2023 **Customer Ref(s):** IIST BUILDING RO WATER **Customer ID:** II210045
Sample Name: DRINKING WATER **Manufacture License No:** N/M **Manufacturer Name:** N/M **Manufacturing Date:** N/M **Reference of Letter:** N/M **Date of Letter:** N/M **Date of Receipt:** 27-01-2023 **Batch Number:** N/M **Batch Size:** N/M **A.R. Number:** N/M **Expiry / Retest Date:** N/M	**Sample Quantity:** 20+1 LITRE **Sealed / Unsealed:** Unsealed **Packing:** PLASTIC CAN + GLASS BOTTLE **Analysis Start Date:** 27-01-2023 **Analysis End Date:** 07-02-2023 **Sampling Date:** N/M **Sampled By:** Client **Sampling Location:** N/M **Page Number:** 2 of 4

Test specification as per IS 10500:2012 (Amendment-4)

Sr.No.	Characteristics	Unit	Result	Specification	MDL	Reference Method	Permissible Limits
13.	Fluoride, as F	mg/L	Less than 0.1	NMT 1.0	N/M	IS : 3025(Part 60)-2008	NMT 1.5
14.	Phenolic Compounds, as C6H5OH	mg/L	Not Detected	NMT 0.001	0.001	IS : 3025(Part 43)-1992	NMT 0.002
15.	Ammonia (as total ammonia-N)	mg/L	0.02	NMT 0.5	0.01	IS : 3025(Part 34)-1988	No relaxation
16.	Chloramines (as Cl2)	mg/L	Not Detected	NMT 4.0	0.05	APHA 4500 Cl F	No relaxation
17.	Sulphide, as H2S	mg/L	Less than 0.05	NMT 0.05	0.05	IS : 3025(Part 29)-1986	No relaxation
18.	Cyanide, as CN	mg/L	Not Detected	NMT 0.05	0.0008	IS : 3025(Part 27)-1986	No relaxation
19.	Anionic Detergents, as MBAS	mg/L	Not Detected	NMT 0.2	0.05	Annex K of IS : 13428-2005	NMT 1.0
20.	Mineral oil	mg/L	Not Detected	NMT 1.0	0.1	IS : 3025(Part 39)-1991	No relaxation
21.	Residual free chlorine, as Cl2	mg/L	Not Detected	NLT 0.2	0.05	APHA 4500 Cl F	NLT 1
22.	Total Alkalinity, as CaCO3	mg/L	16.24	NMT 200	N/M	IS : 3025(Part 23)-1986	NMT 600
23.	Magnesium, as Mg	mg/L	5.8	NMT 30	N/M	IS : 3025(Part 46)-1994	NMT 100

Sr.No.	Characteristics	Unit	Result	Specification	MDL	Reference Method	Permissible Limits
Discipline: Chemical Group: Water Subgroup: Drinking Water **Heavy Metal**							
1.	Copper, as Cu	mg/L	Below Detection Limit	NMT 0.05	0.00510	APHA (3125 B)	NMT 1.5
2.	Iron, as Fe	mg/L	Below Detection Limit	NMT 1.0	0.00510	APHA (3125 B)	No relaxation
3.	Manganese, as Mn	mg/L	Not Detected	NMT 0.1	0.00510	APHA (3125 B)	NMT 0.3
4.	Mercury, as Hg	mg/L	Not Detected	NMT 0.001	0.000510	APHA (3125 B)	No relaxation

IDR00336
09-02-2023 09:38:33
Authorised Signatory

IDR01250
09-02-2023 10:03:55
QA Approver

This document is electronically generated & does not require any signature.

Indore Institute of Science and Technology IQAC INDORE

Indore Institute of Science & Technology INDORE

INDORE INSTITUTE OF SCIENCE & TECHNOLOGY, INDORE

Approved by AICTE, New Delhi, Affiliated to RGPV, Bhopal, Recognized by UGC under section 2(f)

CERTIFICATE OF ANALYSIS

CHOKSI LABORATORIES LIMITED

Issued from:
Choksi Laboratories Limited **(Building - 2 "Pasteur")**
Survey No. 9/1, Balaji Tulsiyana Industrial Estate,
Kumedi, Off. M.R. 10 Toll Naka,
Indore - 452010 (M.P.) INDIA

TC-6384

Issued to: INDORE INSTITUTE OF SCIENCE & TECHNOLOGY, INDORE OPP.IIM (INDORE) RAU-PITHAMPUR ROAD, RAU, INDORE , Madhya Pradesh India - 453331	**CoA ID:** 01701432/22-23 **Report No.:** 01701432/22-23 (v1) **ULR No.:** TC638423000000329F **Issue date:** 09-02-2023 **Customer Ref(s):** IIST BUILDING RO WATER **Customer ID:** II210045
Sample Name: DRINKING WATER **Manufacture License No:** N/M **Manufacturer Name:** N/M **Manufacturing Date:** N/M **Reference of Letter:** N/M **Date of Letter:** N/M **Date of Receipt:** 27-01-2023 **Batch Number:** N/M **Batch Size:** N/M **A.R. Number:** N/M **Expiry / Retest Date:** N/M	**Sample Quantity:** 20+1 LITRE **Sealed / Unsealed:** Unsealed **Packing:** PLASTIC CAN + GLASS BOTTLE **Analysis Start Date:** 27-01-2023 **Analysis End Date:** 07-02-2023 **Sampling Date:** N/M **Sampled By:** Client **Sampling Location:** N/M **Page Number:** 3 of 4

Test specification as per IS 10500:2012 (Amendment-4)

Sr.No.	Characteristics	Unit	Result	Specification	MDL	Reference Method	Permissible Limits
5.	Selenium, as Se	mg/L	Not Detected	NMT 0.01	0.00510	APHA (3125 B)	No relaxation
6.	Total Arsenic, as As	mg/L	Below Detection Limit	NMT 0.01	0.00510	APHA (3125 B)	No relaxation
7.	Barium, as Ba	mg/L	Below Detection Limit	NMT 0.7	0.00510	APHA (3125 B)	No relaxation
8.	Molybdenum, as Mo	mg/L	Not Detected	NMT 0.07	0.00510	APHA (3125 B)	No relaxation
9.	Nickel, as Ni	mg/L	Below Detection Limit	NMT 0.02	0.00510	APHA (3125 B)	No relaxation
10.	Silver, as Ag	mg/L	Below Detection Limit	NMT 0.1	0.00105	APHA (3125 B)	No relaxation
11.	Lead, as Pb	mg/L	Below Detection Limit	NMT 0.01	0.00510	APHA (3125 B)	No relaxation
12.	Zinc, as Zn	mg/L	0.01	NMT 5	0.00510	APHA (3125 B)	NMT 15
13.	Total chromium, as Cr	mg/L	Below Detection Limit	NMT 0.05	0.00510	APHA (3125 B)	No relaxation
14.	Aluminium, as Al	mg/L	Not Detected	NMT 0.03	0.00510	APHA (3125 B)	NMT 0.2
15.	Cadmium, as Cd	mg/L	Below Detection Limit	NMT 0.003	0.00255	APHA (3125 B)	No relaxation

Sr.No.	Characteristics	Unit	Result	Specification	MDL	Reference Method	Permissible Limits
Discipline: Biological Group: Water Subgroup: Drinking Water **Microbiological**							
1.	Total Coliform Bacteria	In 100 mL	Not detected	Should not be detected	N/M	IS:15185:2016	Should not be detected
2.	Escherichia coli	In 100 mL	Not detected	Should not be detected	N/M	IS:15185-2016	Should not be detected

[End of Report]

Remarks:

1. Test report shall not be reproduced either in part or in full, without written approval of CLL Management.
2. CLL does not give any opinion or interpretation of the same.
3. Sample not Drawn by CLL representative
4. Sample information as Furnished by Customer

IDR00336 09-02-2023 09:38:33 **Authorised Signatory**	IDR01250 09-02-2023 10:03:55 **QA Approver**

This document is electronically generated & does not require any signature.

Indore Institute of Science & Technology * INDORE * IQAC

Indore Institute of Science & Technology * INDORE *

INDORE INSTITUTE OF SCIENCE & TECHNOLOGY, INDORE

Approved by AICTE, New Delhi, Affiliated to RGPV, Bhopal, Recognized by UGC under section 2(f)

CERTIFICATE OF ANALYSIS

CHOKSI LABORATORIES LIMITED

Issued from:
Choksi Laboratories Limited **(Building - 2 "Pasteur")**
Survey No. 9/1, Balaji Tulsiyana Industrial Estate,
Kumedi, Off. M.R. 10 Toll Naka,
Indore - 452010 (M.P.) INDIA

TC-6384

Issued to: INDORE INSTITUTE OF SCIENCE & TECHNOLOGY, INDORE OPP.IIM (INDORE) RAU-PITHAMPUR ROAD, RAU, INDORE , Madhya Pradesh India - 453331	**CoA ID:** 01701432/22-23 **Report No.:** 01701432/22-23 (v1) **ULR No.:** TC638423000000329F **Issue date:** 09-02-2023 **Customer Ref(s):** IIST BUILDING RO WATER **Customer ID:** II210045
Sample Name: DRINKING WATER **Manufacture License No:** N/M **Manufacturer Name:** N/M **Manufacturing Date:** N/M **Reference of Letter:** N/M **Date of Letter:** N/M **Date of Receipt:** 27-01-2023 **Batch Number:** N/M **Batch Size:** N/M **A.R. Number:** N/M **Expiry / Retest Date:** N/M	**Sample Quantity:** 20+1 LITRE **Sealed / Unsealed:** Unsealed **Packing:** PLASTIC CAN + GLASS BOTTLE **Analysis Start Date:** 27-01-2023 **Analysis End Date:** 07-02-2023 **Sampling Date:** N/M **Sampled By:** Client **Sampling Location:** N/M **Page Number:** 4 of 4
Test specification as per IS 10500:2012 (Amendment-4)	

5. pH value is reported as at 25 °C.
6. MDL Refer to Method Detection Limit
7. It is recommended that the acceptable limit (specification) is to be implemented values in excess of those mentioned under acceptable render the water not suitable, but still may be tolerated in the absence of an alternative source but up to the limits indicated under 'permissible' limit in the absence of alternate source. , above which the source will have to be rejected.
8. Free Residual Chlorine Limit To be applicable only when water is chlorinated.
9. Subject to terms and conditions mentioned at the end of the CoA.

Indore Institute of Science and Technology IQAC INDORE

Indore Institute of Science & Technology INDORE

IDR00336 09-02-2023 09:38:33	IDR01250 09-02-2023 10:03:55
Authorised Signatory	**QA Approver**

This document is electronically generated & does not require any signature.

INDORE INSTITUTE OF SCIENCE & TECHNOLOGY, INDORE

Approved by AICTE, New Delhi, Affiliated to RGPV, Bhopal, Recognized by UGC under section 2(f)

Canteen RO Water Testing Report

CERTIFICATE OF ANALYSIS

CHOKSI LABORATORIES LIMITED

Issued from:
Choksi Laboratories Limited **(Building - 2 "Pasteur")**
Survey No. 9/1, Balaji Tulsiyana Industrial Estate,
Kumedi, Off. M.R. 10 Toll Naka,
Indore - 452010 (M.P.) INDIA

TC-6384

Issued to:	INDORE INSTITUTE OF SCIENCE & TECHNOLOGY, INDORE OPP.IIM (INDORE) RAU-PITHAMPUR ROAD, RAU, INDORE , Madhya Pradesh India - 453331	**CoA ID:** **Report No.:** **ULR No.:** **Issue date:** **Customer Ref(s):** **Customer ID:**	01701431/22-23 01701431/22-23 (v1) TC638423000000317F 08-02-2023 CANTEEN BUILDING RO WATER II210045
Sample Name: **Manufacture License No:** **Manufacturer Name:** **Manufacturing Date:** **Reference of Letter:** **Date of Letter:** **Date of Receipt:** **Batch Number:** **Batch Size:** **A.R. Number:** **Expiry / Retest Date:**	DRINKING WATER N/M N/M N/M N/M N/M 27-01-2023 N/M N/M N/M N/M	**Sample Quantity:** **Sealed / Unsealed:** **Packing:** **Analysis Start Date:** **Analysis End Date:** **Sampling Date:** **Sampled By:** **Sampling Location:** **Page Number:**	20+1 LITRE Unsealed PLASTIC CAN + GLASS BOTTLE 27-01-2023 07-02-2023 N/M Client N/M 1 of 4

Test specification as per IS 10500:2012 (Amendment - 4)

Description :- Clear colorless liquid without suspended particles

Sr.No.	Characteristics	Unit	Result	Specification	MDL	Reference Method	Permissible Limits
Discipline: Chemical Group: Water Subgroup: Drinking Water **Chemical Parameters**							
1.	Colour	Hazen unit	Less than 1	NMT 5	N/M	IS : 3025 (Part-4) _ 2021	NMT 15
2.	Odour	Not Applicable	Agreeable	Agreeable	N/M	IS : 3025(Part 5)-2018	Agreeable
3.	Taste	Not Applicable	Agreeable	Agreeable	N/M	IS : 3025(Part 8)-1984	Agreeable
4.	Turbidity	NTU	0.2	NMT 1	N/M	IS : 3025(Part 10)-1984	NMT 5
5.	Total dissolved solids	mg/L	330	NMT 500	N/M	IS : 3025(Part 16)-1984	NMT 2000
6.	pH value	Not Applicable	8.0	6.5-8.5	N/M	IS 3025 (Part-11) : 2022	No relaxation
7.	Total Hardness, as CaCO3	mg/L	99	NMT 200	N/M	IS : 3025(Part 21)-2009	NMT 600
8.	Calcium, as Ca	mg/L	25.4	NMT 75	N/M	IS : 3025(Part 40)-1991	NMT 200
9.	Boron, as B	mg/L	Not Detected	NMT 0.5	0.04	Annex H of IS : 13428-2005	NMT 1.0
10.	Chloride, as Cl	mg/L	25.07	NMT 250	N/M	IS : 3025(Part 32)-1988	NMT 1000
11.	Sulphate,as SO4	mg/L	2.3	NMT 200	1.0	IS : 3025(Part 24)-1986	NMT 400
12.	Nitrate, as NO3	mg/L	12.7	NMT 45	0.1	IS : 3025(Part 34)-1988	No relaxation

IDR00336
08-02-2023 11:14:14
Authorised Signatory

IDR01250
08-02-2023 11:29:55
QA Approver

This document is electronically generated & does not require any signature.

Indore Institute of Science and Technology IQAC INDORE

Indore Institute of Science & Technology INDORE

INDORE INSTITUTE OF SCIENCE & TECHNOLOGY, INDORE

Approved by AICTE, New Delhi, Affiliated to RGPV, Bhopal, Recognized by UGC under section 2(f)

Boys Hostel RO Water Testing Report

CERTIFICATE OF ANALYSIS

CHOKSI LABORATORIES LIMITED

Issued from:
Choksi Laboratories Limited **(Building - 2 "Pasteur")**
Survey No. 9/1, Balaji Tulsiyana Industrial Estate,
Kumedi, Off. M.R. 10 Toll Naka,
Indore - 452010 (M.P.) INDIA

TC-6384

Issued to: INDORE INSTITUTE OF SCIENCE & TECHNOLOGY, INDORE OPP.IIM (INDORE) RAU-PITHAMPUR ROAD, RAU, INDORE , Madhya Pradesh India - 453331	**CoA ID:** 01701435/22-23 **Report No.:** 01701435/22-23 (v1) **ULR No.:** TC638423000000318F **Issue date:** 08-02-2023 **Customer Ref(s):** BOYS HOSTEL BUILDING RO WATER **Customer ID:** II210045
Sample Name: DRINKING WATER **Manufacture License No:** N/M **Manufacturer Name:** N/M **Manufacturing Date:** N/M **Reference of Letter:** N/M **Date of Letter:** N/M **Date of Receipt:** 27-01-2023 **Batch Number:** N/M **Batch Size:** N/M **A.R. Number:** N/M **Expiry / Retest Date:** N/M	**Sample Quantity:** 20+1 LITRE **Sealed / Unsealed:** Unsealed **Packing:** PLASTIC CAN + GLASS BOTTLE **Analysis Start Date:** 27-01-2023 **Analysis End Date:** 07-02-2023 **Sampling Date:** N/M **Sampled By:** Client **Sampling Location:** N/M **Page Number:** 1 of 4
Test specification as per IS 10500:2012 (Amendment-4)	

Description :- Clear colorless liquid without suspended particles

Sr.No.	Characteristics	Unit	Result	Specification	MDL	Reference Method	Permissible Limits
Discipline: Chemical Group: Water Subgroup: Drinking Water **Chemical Parameters**							
1.	Colour	Hazen unit	Less than 1	NMT 5	N/M	IS : 3025 (Part-4) _ 2021	NMT 15
2.	Odour	Not Applicable	Agreeable	Agreeable	N/M	IS : 3025(Part 5)-2018	Agreeable
3.	Taste	Not Applicable	Agreeable	Agreeable	N/M	IS : 3025(Part 8)-1984	Agreeable
4.	Turbidity	NTU	0.1	NMT 1	N/M	IS : 3025(Part 10)-1984	NMT 5
5.	Total dissolved solids	mg/L	242	NMT 500	N/M	IS : 3025(Part 16)-1984	NMT 2000
6.	pH value	Not Applicable	8.1	6.5-8.5	N/M	IS 3025 (Part-11) : 2022	No relaxation
7.	Total Hardness, as CaCO3	mg/L	71.3	NMT 200	N/M	IS : 3025(Part 21)-2009	NMT 600
8.	Calcium, as Ca	mg/L	19.0	NMT 75	N/M	IS : 3025(Part 40)-1991	NMT 200
9.	Boron, as B	mg/L	Not Detected	NMT 0.5	0.04	Annex H of IS : 13428-2005	NMT 1.0
10.	Chloride, as Cl	mg/L	15.4	NMT 250	N/M	IS : 3025(Part 32)-1988	NMT 1000
11.	Sulphate,as SO4	mg/L	Below Detection Limit	NMT 200	1.0	IS : 3025(Part 24)-1986	NMT 400
12.	Nitrate, as NO3	mg/L	11.1	NMT 45	0.1	IS : 3025(Part 34)-1988	No relaxation

IDR00336
08-02-2023 11:16:21
Authorised Signatory

IDR01250
08-02-2023 11:31:55
QA Approver

This document is electronically generated & does not require any signature.

Indore Institute of Science & Technology IQAC INDORE

Indore Institute of Science & Technology INDORE

INDORE INSTITUTE OF SCIENCE & TECHNOLOGY, INDORE

Approved by AICTE, New Delhi, Affiliated to RGPV, Bhopal, Recognized by UGC under section 2(f)

Girls Hostel RO Water Testing Report

CERTIFICATE OF ANALYSIS

CHOKSI LABORATORIES LIMITED

Issued from:
Choksi Laboratories Limited **(Building - 2 "Pasteur")**
Survey No. 9/1, Balaji Tulsiyana Industrial Estate,
Kumedi, Off. M.R. 10 Toll Naka,
Indore - 452010 (M.P.) INDIA

TC-6384

Issued to: INDORE INSTITUTE OF SCIENCE & TECHNOLOGY, INDORE OPP.IIM (INDORE) RAU-PITHAMPUR ROAD, RAU, INDORE , Madhya Pradesh India - 453331	**CoA ID:** 01701436/22-23 **Report No.:** 01701436/22-23 (v1) **ULR No.:** TC638423000000378F **Issue date:** 11-02-2023 **Customer Ref(s):** GIRLS HOSTEL BUILDING RO WATER **Customer ID:** II210045
Sample Name: DRINKING WATER **Manufacture License No:** N/M **Manufacturer Name:** N/M **Manufacturing Date:** N/M **Reference of Letter:** N/M **Date of Letter:** N/M **Date of Receipt:** 27-01-2023 **Batch Number:** N/M **Batch Size:** N/M **A.R. Number:** N/M **Expiry / Retest Date:** N/M	**Sample Quantity:** 20+1 LITRE **Sealed / Unsealed:** Unsealed **Packing:** PLASTIC CAN + GLASS BOTTLE **Analysis Start Date:** 27-01-2023 **Analysis End Date:** 09-02-2023 **Sampling Date:** N/M **Sampled By:** Client **Sampling Location:** N/M **Page Number:** 1 of 4
Test specification as per IS 10500:2012 (Amendment-4)	

Description :- Clear colorless liquid without suspended particles

Sr.No.	Characteristics	Unit	Result	Specification	MDL	Reference Method	Permissible Limits
Discipline: Chemical Group: Water Subgroup: Drinking Water **Chemical Parameters**							
1.	Colour	Hazen unit	Less than 1	NMT 5	N/M	IS : 3025(Part 4)-1983	NMT 15
2.	Odour	Not Applicable	Agreeable	Agreeable	N/M	IS : 3025(Part 5)-2018	Agreeable
3.	Taste	Not Applicable	Agreeable	Agreeable	N/M	IS : 3025(Part 8)-1984	Agreeable
4.	Turbidity	NTU	0.6	NMT 1	N/M	IS : 3025(Part 10)-1984	NMT 5
5.	Total dissolved solids	mg/L	266	NMT 500	N/M	IS : 3025(Part 16)-1984	NMT 2000
6.	pH value	Not Applicable	7.7	6.5-8.5	N/M	IS : 3025(Part 11)-1983	No relaxation
7.	Total Hardness, as CaCO3	mg/L	55.44	NMT 200	N/M	IS : 3025(Part 21)-2009	NMT 600
8.	Calcium, as Ca	mg/L	6.3	NMT 75	N/M	IS : 3025(Part 40)-1991	NMT 200
9.	Boron, as B	mg/L	Not Detected	NMT 0.5	0.04	Annex H of IS : 13428-2005	NMT 1.0
10.	Chloride, as Cl	mg/L	17.4	NMT 250	N/M	IS : 3025(Part 32)-1988	NMT 1000
11.	Sulphate,as SO4	mg/L	1.4	NMT 200	1.0	IS : 3025(Part 24)-1986	NMT 400
12.	Nitrate, as NO3	mg/L	7.0	NMT 45	0.1	IS : 3025(Part 34)-1988	No relaxation

IDR00336
11-02-2023 10:48:34
Authorised Signatory

IDR01250
11-02-2023 11:39:31
QA Approver

This document is electronically generated & does not require any signature.

Indore Institute of Science and Technology IQAC INDORE

Indore Institute of Science & Technology INDORE

Water Testing letter to Choksi Laboratories Ltd

Indore Institute of Science & Technology

Indore Institute of Science & Technology
Affiliated to - RGPV (Bhopal) & Approved by - AICTE(New Delhi)

27.12.2022

To,
Choksi Laboratories Ltd.
MR-10 Toll, Indore (M.P)

Subject: Testing of Water Samples (6 Nos)

Dear Sir,

We are sending 6 Nos Water Samples in two Different Bottles of 20 Liters & 2 Liters for testing the portability.

The nomenclature of Samples is as follows:

1 Farming Bore
2 Khajoor Tree
3 Nallah Moter
4 Staff Flat
5 Basket Ball
6 C-Block well

You are kindly requested to look into the matter & perform 40 Standard Tests for portability & provide the reports at the earliest.

Contact person: Dr Niraj Soni

Email-niraj.soni@indoreinstitute.com

Mobile-9977025413

GST-NIL

Regard's

Dr Keshav Patidar
Principal-IIST

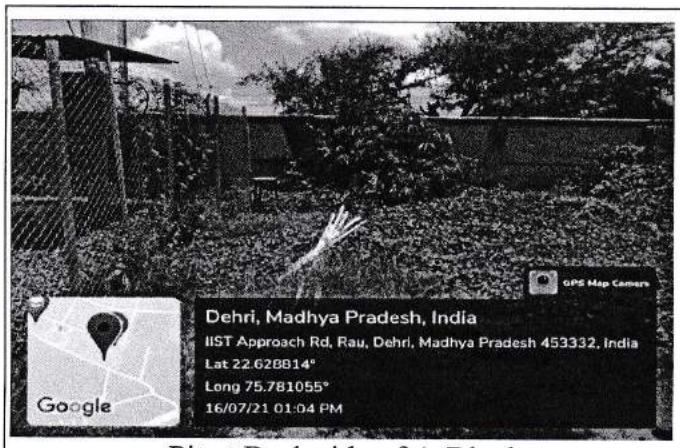
Indore Institute of Science & Technology IQAC INDORE

Indore Institute of Science & Technology INDORE

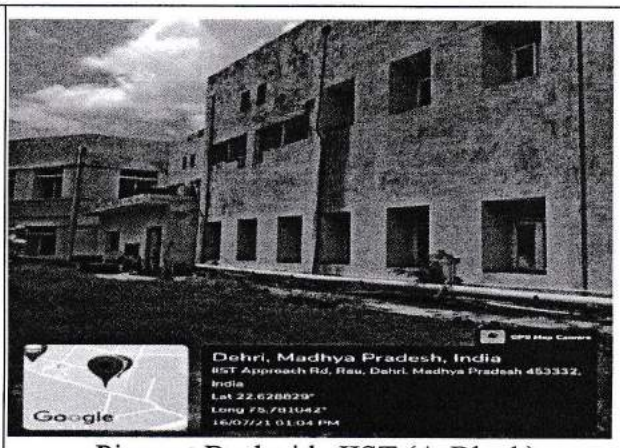
INDORE INSTITUTE OF SCIENCE & TECHNOLOGY, INDORE

Approved by AICTE, New Delhi, Affiliated to RGPV, Bhopal, Recognized by UGC under section 2(f)

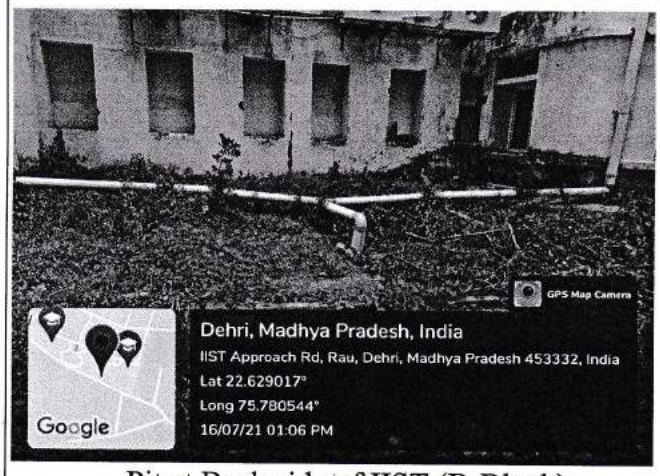
Geotagged Photo for Rain water harvesting



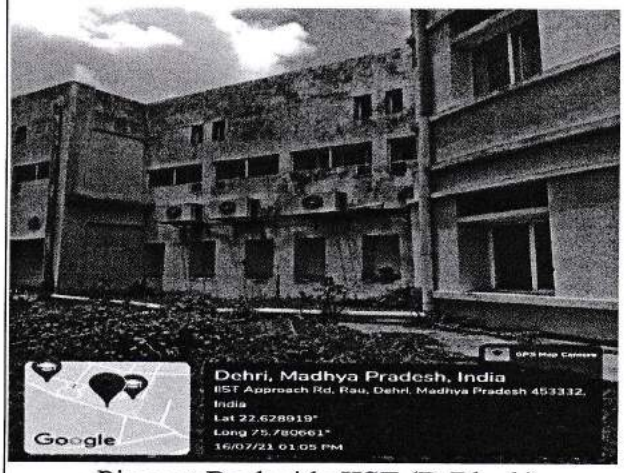
Pit at Back side of A-Block



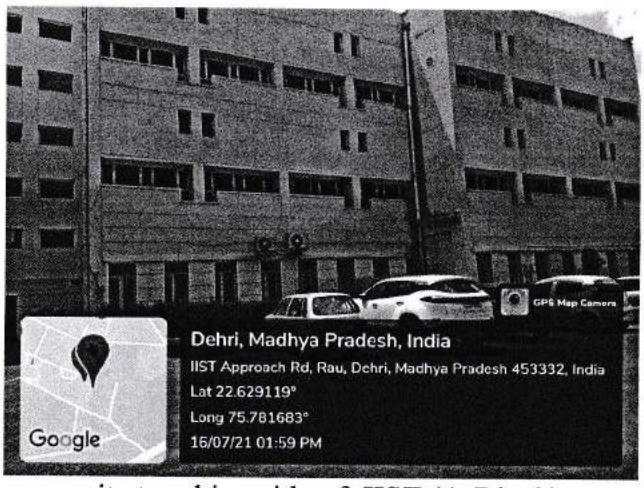
Pipes at Back side IIST (A-Block)



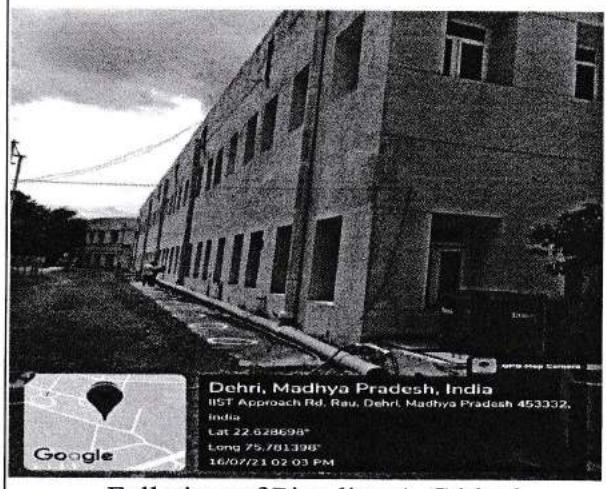
Pit at Back side of IIST (B-Block)



Pipes at Back side IIST (B-Block)



pit at parking side of IIST (A-Block)

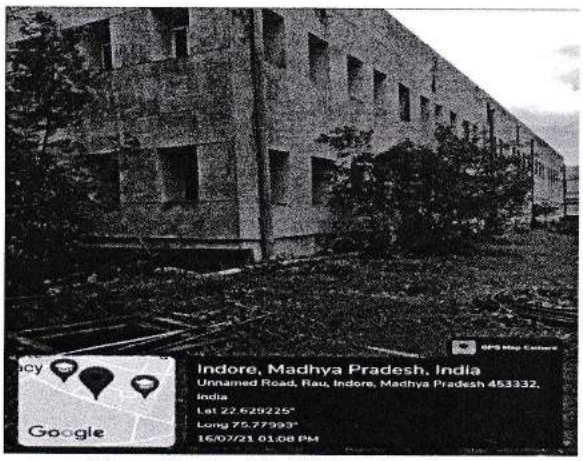


Full view of Pipe line A-C block

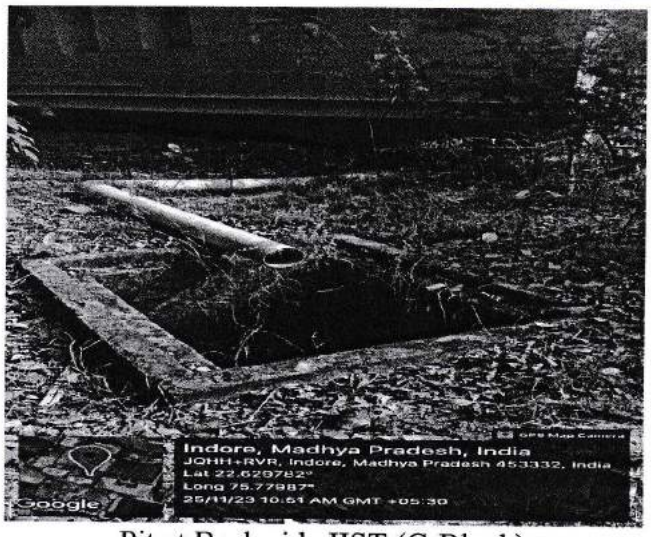
Indore Institute of Science and Technology IQAC INDORE

Indore Institute of Science & Technology INDORE

Back side IIST (C-Block)

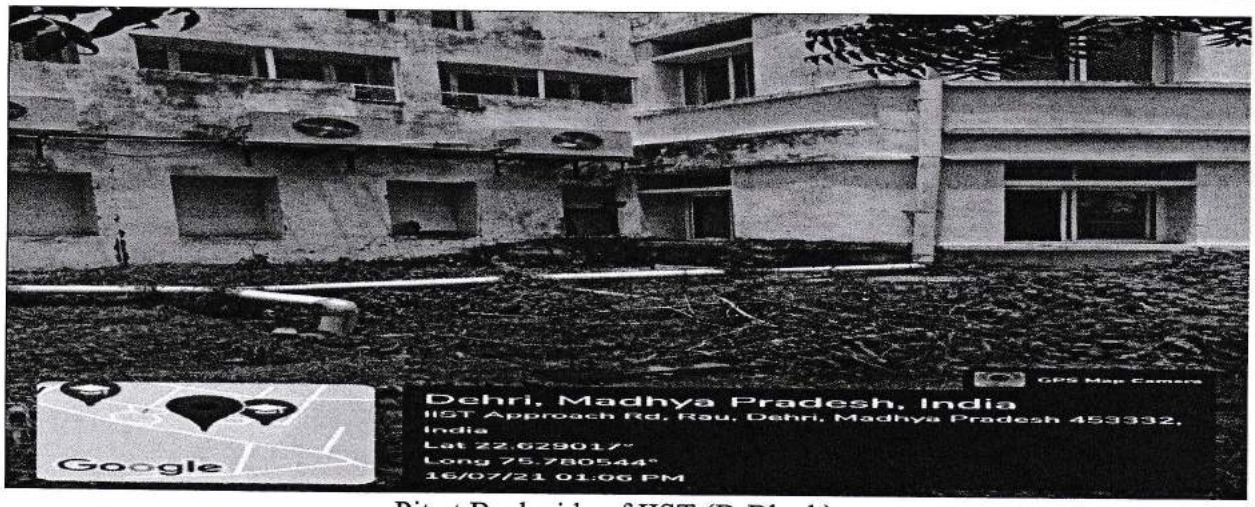


Pit at Back side IIST (C-Block)



Pit at Back side IIST (C-Block)

Pit at Back side of IIST (B-Block)



Pit at Back side of IIST (B-Block)

Indore Institute of Science and Technology IQAC INDORE

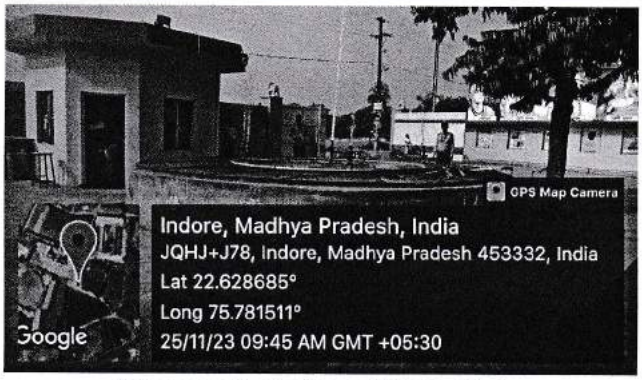
Indore Institute of Science & Technology INDORE

Geotagged Photo for Borewell /Open well recharge

An open well located in the college campus is recharged by the rainwater. The artificial recharge to ground water aims at augmentation of ground water reservoir by modifying the natural movement of surface water utilizing suitable civil construction techniques. Artificial recharge techniques normally address to following issues –

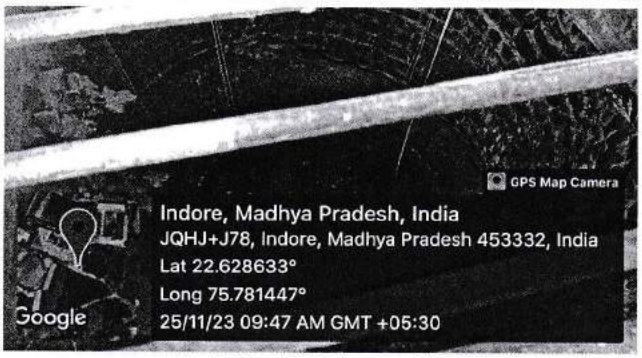
1. To enhance the sustainable yield in areas where over-development has depleted the aquifer.
2. Conservation and storage of excess surface water for future requirements since these requirements often change within a season or a period.
3. To improve the quality of existing ground water through dilution.

To remove bacteriological and other impurities from sewage and wastewater so that water is suitable for re-use. The basic purpose of artificial recharging of ground water is to restore supplies from aquifers depleted due to excessive ground water development.

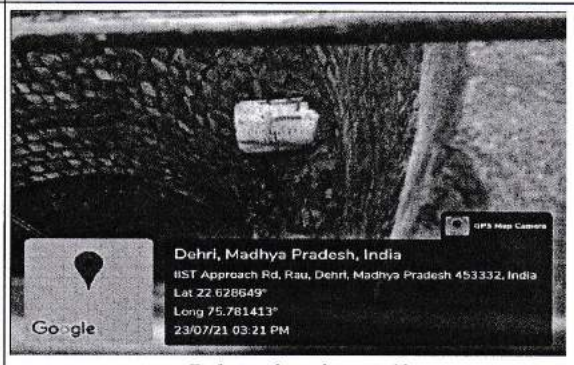


Open well at side of Main Gate

Top view of open well



Inlet pipe in well



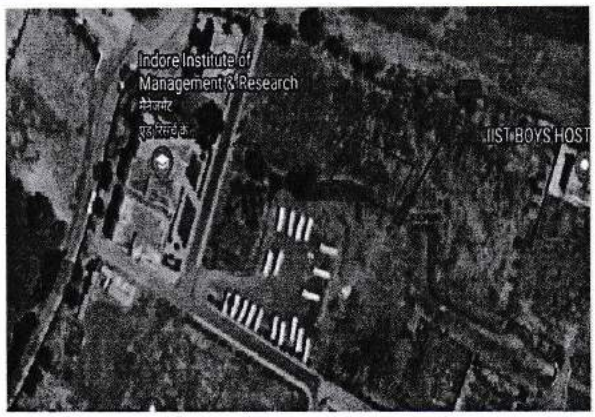
Inlet pipe in well

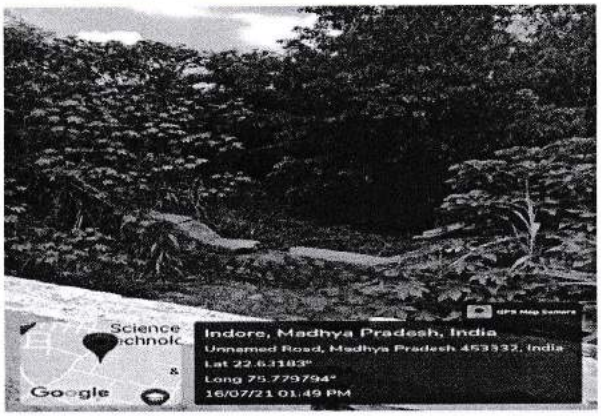
Indore Institute of Science and Technology IQAC INDORE

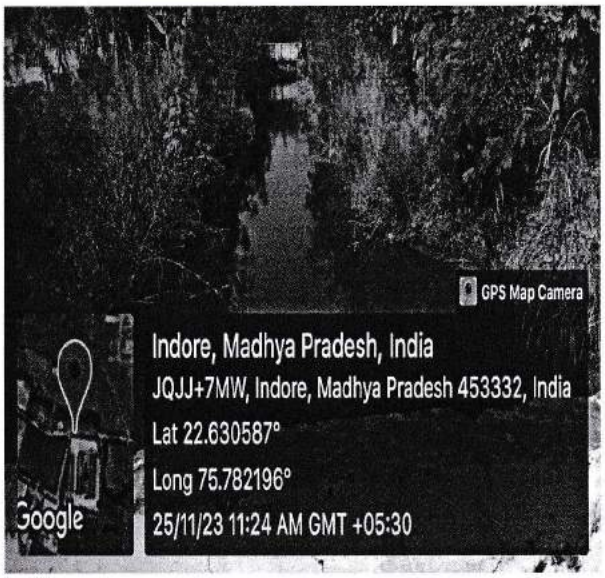
Indore Institute of Science & Technology INDORE

Geotagged Photo for Construction of tanks and bunds

Runoff generated in the campus is collected using small masonry bund (check dam) in the campus on a natural canal passing through the campus. In the Institute Bunds are constructed to control the water table within the reclamation area and control the flow of the discharge water in the fill area. It is Masonry bund. Water retention is the primary purpose of such bund.







Opposite Girls Hostel IIST

Maintenance of Water Bodies and Distribution system

Total 7 numbers of Bore well and 2 numbers of open well are available in the IIST Campus. The location of Bore well as follows –

1. One Bore Well situated to the near Basketball Court
2. One Bore Well situated opposite to the Guest House

Indore Institute of Science and Technology * INDORE * IQAC

Indore Institute of Science & Technology * INDORE *

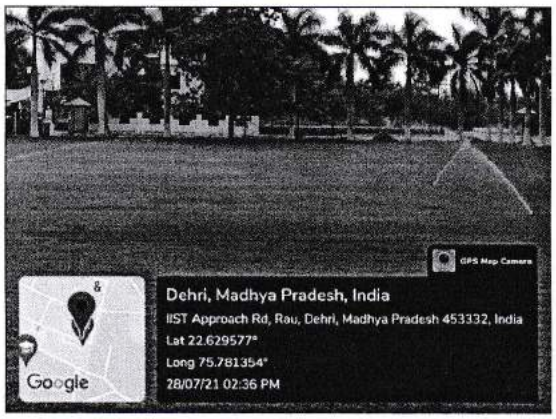
3. One Bore Well situated to the near Sports Complex
4. One Bore Well situated opposite to the Staff Quarter
5. One Bore Well situated at Laundry (Back to Boys Hostel)
6. Two Bore Well situated in the Farm (Near Mango Trees)

Maintenance of open well

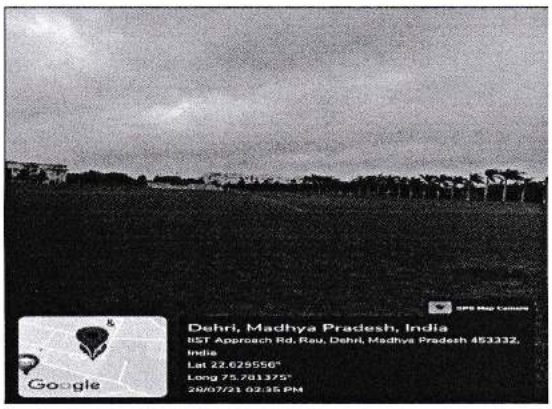
Video Link of open well cleaning

1. https://youtu.be/bc-6a8x_fns
2. https://youtu.be/UqhViECW1as
3. https://youtu.be/-4RdOoyQMMk

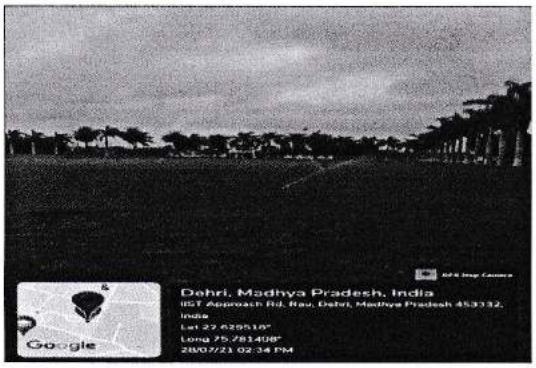
Geotagged Photo for Water Conservation through Sprinkler System for watering



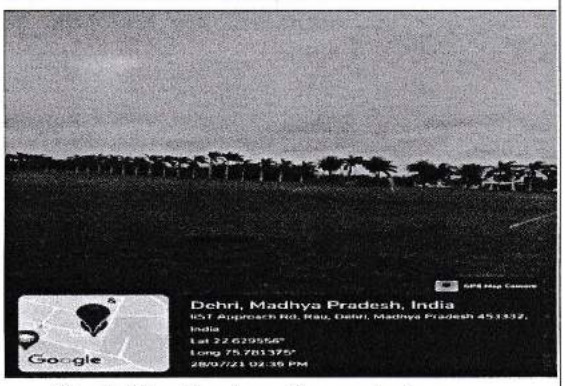
Sprinkler System for watering



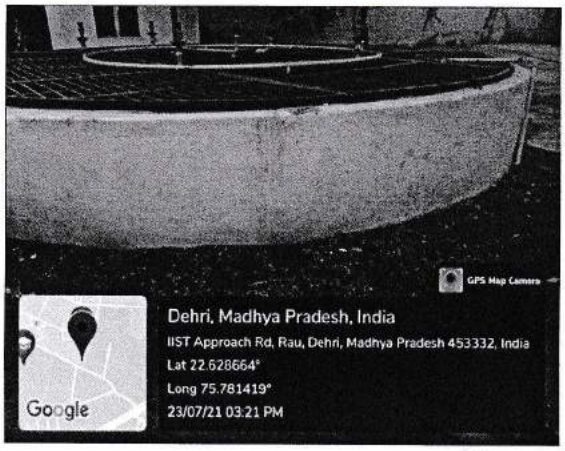
Sprinkler System for watering



Sprinkler System for watering

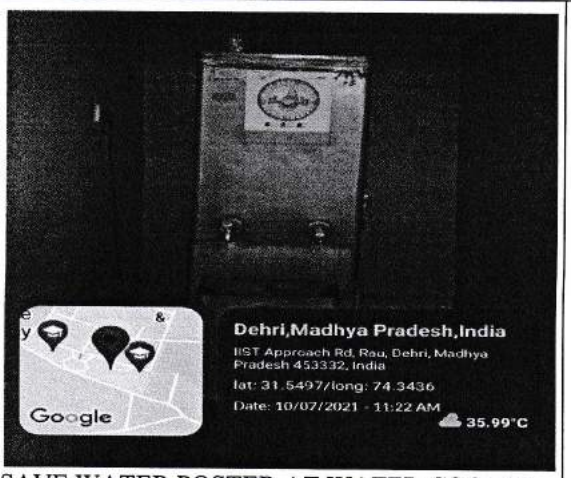


Sprinkler System for watering

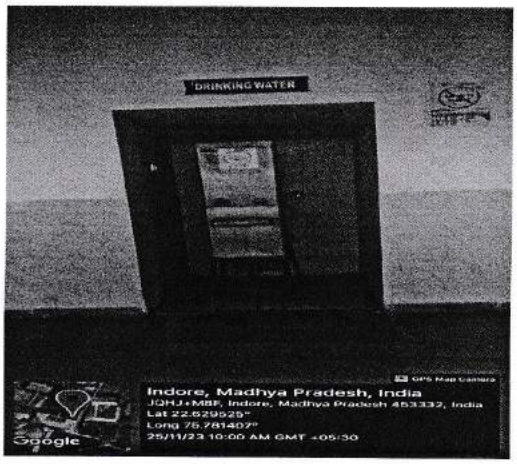


Fountain at Well

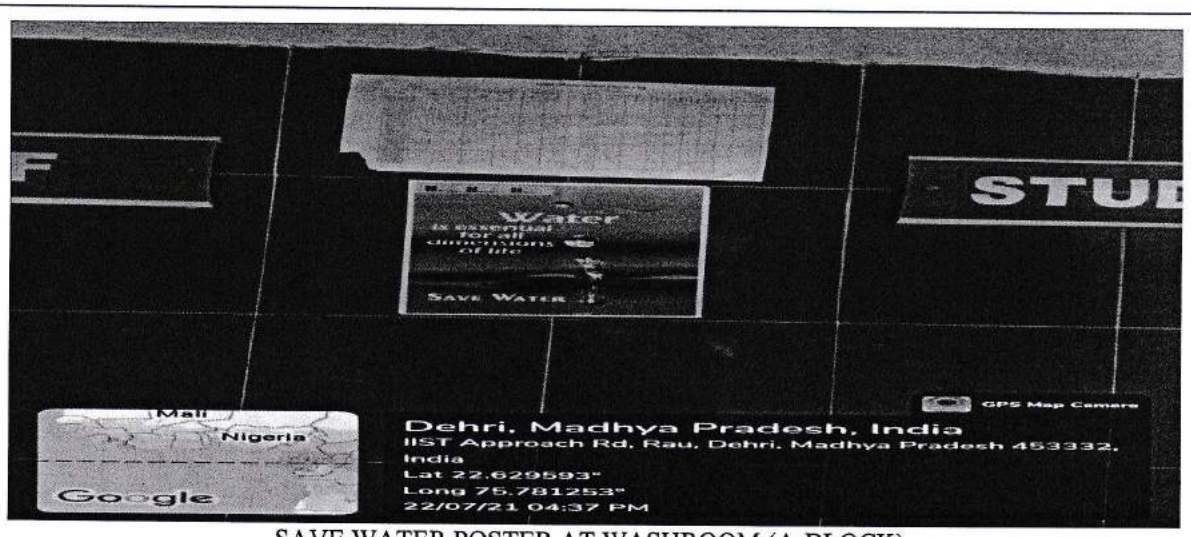
Saving Water



SAVE WATER POSTER AT WATER COOLER A-BLOCK



SAVE WATER POSTER AT WATER COOLER A-BLOCK



SAVE WATER POSTER AT WASHROOM (A-BLOCK)

Indore Institute of Science and Technology IQAC INDORE

Indore Institute of Science & Technology INDORE

PO of Sewage Treatment Plant (STP) Plant

Sewage Treatment Plant (STP) established in the Institute by the Enviroessential Pvt. Ltd The Work Order/Purchase Order are as follows.

Shail Educational and Welfare Society

Work Order

PO No: SEWS/WO/2021-22/282
PR./ CIVIL P/83

Date: - 17.01.2022

To,
M/s ENVIRO ESSENTIALS
Mr. Ajit kumar bhaskar gaikwad
41, Naykunagar, Wadarwadi, Ahmednagar.
Maharashtra (414001)
Local Add. Branch Office 19, Mangal NX Besides petrol pump.
Sukhliya, indore (M.P.-452010)
Mob.9039433403, 9503221150, 7709386770

Subject : Work order for Sewage treatment Plant installation.

Dear Sir,
With reference to your quotation, we are pleased to award you work order for the same

Basics of Design:-
Sewage Treatment Plant:-

a) Plant Capacity	:	100KLD (m^3/day)
b) Operation Time	:	20 hrs.
c) Hourly Flow (Feed to STP)	:	$5m^3$/hr
d) Mode of Operation	:	Manual.
e) Process	:	MBBR Technology

1. **Characteristics of Raw &Treated Sewage**

The characteristics of raw sewage assume dare given below:

Sr. No.	Parameters	Unit	Raw Sewage	Treated Sewage
1	pH	-	5.5 -8	6.5 – 7.2
2	Biochemical Oxygen Demand(BOD)	mg/l	300	≤ 10
3	Chemical Oxygen Demand(COD)	mg/l	400	≤ 30
4	Total Suspended Solids(TSS)	mg/l	250	≤ 30
5	Oil & Grease	mg/l	15	≤ 5

17/1/2022

Indore Institute of Science and Technology

Approved by AICTE, New Delhi & Affiliated to RGPV, Bhopal

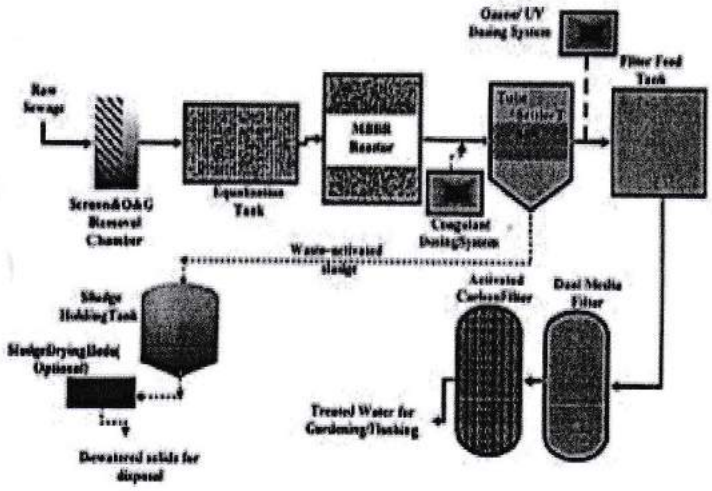
1. **Scheme of Treatment:**

Thesewagetreatmentplantwillbedesignedforacapacityof100KLD.Sewagetreatmentplant scheme will be based on an Aerobic Process.

➢ **Pretreatment:**
Pretreatment will consist of Screening, Oil & Grease removal & Flow equalization.
➢ **Secondary/Biological Treatment:**
Secondary Treatment process will consist of Biological Aeration (MBBR) and Biological Clarification.
➢ **Tertiary Treatment:**
Tertiary treatment process will consist of Media (Sand & Carbon) Filtration & Disinfection.
➢ **Sludge Treatment:**
Sludge treatment process will consist of Sludge Drying Bed.

Plant Data Details:

1 **Process FlowDiagramSTP**



Indore Institute of Science and Technology
Approved by AICTE, New Delhi & Affiliated to RGPV, Bhopal

2. **Process Description Sewage Treatment Plant:**

The sewage treatment plant will be designed for a capacity of 100 KLD. The scheme of treatment plant will be based on MBBR Technology. Raw sewage will be passed through fine manual bar screen store move solids, floatables, and Oil & Grease chamber for removal of oil & grease from raw sewage before passing to equalization tank. The sewage then will be collected in Tank. The Equalization cum collection Tank will be provided with aeration by blowers for mixing and aseptic conditions. Raw sewage from equalization Tank will be lifted by Raw Sewage Lifting Pumps to MBBR Aeration Tank. Aeration tank is provided with Aeration Systems for biological aeration purpose with MBBR Media.

In the aeration tank oxidation of biological matter occurs. The aerobic bacteria present in activated sludge help in digestion of organic matter degradation for reduction of BOD. Aerobically digested sewage water is then passed to secondary clarifier where it biological Flocs formed will be removed and separated by means of gravity. The excess bio sludge is sent sludge drying bed. Clarified water is then passed through multimedia and activated carbon filters for removing turbidity by means of Filter FeedPumps.Multimediafiltrationremovesfineparticulateandsuspendedsolidswhileactivated carbon filter removes odour and organic traces. Ozonation / UV treatment issued for dis infection of treated water.

3. **Scope of Supply:**

Electro-Mechanical Equipments:

Sr. No.	Description	Quantity
1.	Manual Bar Screen	1No.
2.	Raw Sewage Lifting Pumps	2No.
3.	Blowers	2No.
4.	Air Diffusion Grid For Equalization & Aeration and sludge Holding Tank	1 lot
5.	Air Diffusers for Aeration Tank	1 lot
6.	MBBR Media	1Lot
7.	Tube Settler Media	1No
8.	Sludge Recycle Pump	2No
9.	Disinfection system	1No
10.	Filter Feed Pump	2No.
11.	Dual Media Filter	1No.
12.	Activated Carbon Filter	1No.

Indore Institute of Science and Technology

Approved by AICTE, New Delhi & Affiliated to RGPV, Bhopal

4. Instrumentation and Controls:

Sr.No.	Description	Quantity.
1	Electrical Panel	1No.
2	Pressure gauge	As per Requirement
3	Level Switch	0No.
4	Flow Meter	1No.

Technical Specifications of Electro-Mechanical Equipments:

1. Manual Bar Screen-

Sr. No.	Description	Unit	Specification
1	Quantity	Nos.	1
2	Size of Bar	mm	10
3	MOC	-	MSEP/GI/SS316
4	Make	-	EE

2. Blowers for Equalization Tank & Aeration Tank-

Sr.No.	Description	Unit	Specification
1	Quantity	Nos.	2
2	Air Capacity	$m^3/hr.$	90
3	Power	HP	3
4	Motor Speed	rpm	1440
5	Make	-	Everest/Equi.

3. Air Diffusion Grid for Equalization Tank-

Sr.No.	Description	Unit	Specification
1	Quantity	Nos.	1 lot
2	MOC	-	UPVC
3	make	-	Astral/Finolex

4. Raw Sewage Lifting Pump-

Sr.No.	Description	Unit	Specification
1	Quantity	Nos.	2
2	Capacity	$m^3/hr.$	5.0
3	Head	m	12
4	Power	HP	1.0
5	Make	-	Kirloskar /Lubi

5. Air Diffusion Grid for Aeration Tank + Diffusers -

Sr. No.	Description	Unit	Specification
1	Quantity	Nos.	1
2	MOC	-	UPVC
3	Make	-	Astral/Finolex/equivalent
	Diffusers		
4	Quantity	Nos.	8Nos
5	Type	-	Tube/Disc
6	MOC	-	Membrane-EPDM
7	Make		S-Copen/EDI

dmalviya

Indore Institute of Science and Technology IQAC INDORE

Indore Institute of Science & Technology INDORE

7. MBBR Media For Aeration Tank-

Sr.No.	Description	Unit	Specification
1	Media Volume	m^3	1Lot
2	Media Type	-	MBBR
3	MOC	-	Stabilized PP
4	Make	-	Cool deck /MMAqua

8. Tube Settler Media-

Sr.No.	Description		Specification
1	Media volume		1 lot
2	Filtering Media	-	Tube Settler Media
3	Application	-	Solids Separation

9. Sludge Recycle Pump -

Sr.No.	Description	Unit	Specification
1	Quantity	Nos.	2
2	Capacity	m^3/hr	0.75
3	Head	m	8
4	Type	-	Centrifugal
5	Power	HP	0.50
6	Make	-	Kirloskar/Equiv.

10. Ozone Dosing System -

Sr.No.	Description	Unit	Specification
1	Discharge	-	Ozone Gas
2	Dosing System	Nos.	1
3	Pump capacity	HP	0.5Hp

11. Filter Feed Pump–

Sr.No.	Description	Unit	Specification
1	Quantity	Nos.	2
2	Capacity	$m^3/hr.$	5.5
3	Head	m	26
4	Type	-	Centrifugal
5	Power	HP	2
6	Pump make	-	Kirloskar/Equi.

12. Dual Media Filter-

Sr.No.	Description	Unit	Specification
1	Quantity	Nos.	1
2	Capacity	$m^3/hr.$	5.5
3	Type	-	Downflow
4	Operating design pressure	Kg/cm^2	3.5
5	Shell diameterxHOS	mm	750 x1200
6	Operation	-	Manual
7	Vessel Material	-	MSEP/FRP
8	Valvetype	-	MPV
9	Mediatype	-	FineSand +Coarse sandGravel+Pebbles

Amalniya

Indore Institute of Science and Technology IQAC INDORE

Indore Institute of Science & Technology INDORE

13. Activated Carbon Filter –

Sr. No.	Description	Unit	Specification
1	Quantity	Nos.	1
2	Capacity	m^3/hr.	5.5
3	Type	-	Down flow
4	Operating design pressure	Kg/cm^2	2.5
7	Shelldiameterx HOS	mm	750 x1200
8	Operation	-	Manual
9	Vessel Material	-	MSEP/FRP
10	Valve type	-	MPV
11	Media type	-	Carbon + Coarses and Gravel+ Pebbles

14. Piping Specifications:

Sr. No.	Description(Fluid)	Material of Construction
1	Raw Sewage	UPVC
2	Bio sludge	UPVC
3	Inter connecting pipes for STP	UPVC

15. Electrical Panel and Cabling:

Sr. No.	Description of Instruments	Nos.	Specification
1	Panel	-	Semi-Automatic
2	Cabling	-	Electricalcablingshallbeprovidedfromcontrol paneltovariousunitsofwater Treatment plant .Copper Flexible.

Tank Description

Sr.No	Civil (Client'sScope)	MOC	Volume,Effective	Scope
1.	Bar Screen chamber	Brickwork	0.94 m3	client
2.	Oil & Grease Chamber	Brickwork	0.94 m3	client
3.	Equalization Tank	RCC	62.5 m3	client
4.	Treated Water Tank	RCC	25 m3	client
5.	Sludge Drying Bed	Brickwork	6.75 m3	client
6.	Aeration Tank	RCC	37.50 m3	client
7.	Tube Settler Tank	RCC	10.45 m3	client
8.	Intermediate Storage Tank	RCC	12.7 m3	client
9.	Plinth & Foundation for Equipments	RCC	As required	client

Amalwiya

Indore Institute of Science and Technology

Approved by AICTE, New Delhi & Affiliated to RGPV, Bhopal

UTILITY CONSUMPTION :

Tooperate STP plants following headsare to be considered.

- Electricity consumption
- Chemicals & Manpower

a. Electrical load

Sr.No.	Description	Installed load ,Kw	Working load, Kw
01	STP Plant	10.2	5.25

b. Chemical & Manpower

Sr.No	Description	Quantity
01	Alum	1 kg/day
02	2 Operator	9hrshift

Battery Limits:

Battery Limit extends up to-

- Raw water–At inlet of Screen Chamber.
- Treated Water–At outlet of Carbon Filter.
- Sludge Handling–At outlet of Sludge Drying Beds.
- Electrical–At terminal of MCC panel.

The following are excluded from your scope of supply

- All civil works.
- Consents/permission from government authorities.
- Supply for electrical power and earthling to electrical control panel.
- Outlet piping to drain(from outlet of Filter)

BATTERYLIMIT

1. Effluent at Inlet of Bar Screen Chamber to Outlet of Filters.
2. Sludge outlet to Sludge Drying bed.
3. Power supply of electrical panel.

Total Amount – Rs.7,10,000 (Seven Lakh Ten Thousand Only) + 18% GST extra.

Amaliya

Indore Institute of Science and Technology IQAC INDORE

Indore Institute of Science & Technology

Indore Institute of Science and Technology

Approved by AICTE, New Delhi & Affiliated to RGPV, Bhopal

Terms & Conditions:-

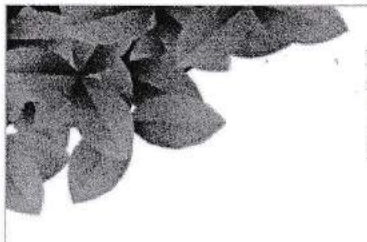
1. Prices	:	F.O.R Shail Campus
2. Payment	:	50% of total amount as an Advance (Within a week structure drawing will be provide by vendor)
		35% of total amount against Performa prior to dispatch
		10% of total amount against Erection & commissioning
		5% of total amount as a Security Deposit will be deducted from each RA bill & shall be released after 04 month of successful commissioning.
3. Acceptance	:	Services will be approved & certified by civil dept. Contractor has to take care of safety precautions while performing the work, institute will not be responsible for any loss of life & material.
4. Compensation		: No. compensation will be provided for any theft or mishap
5. Others Terms:		(1) 1year warranty period will be provided by you or company for any kind of machine failure.
		(2) Log Book either digital or manual will be provided by you.
		(3) Any problem in operation will be addressed within 24 hours by you (Till Warranty period)

Sr. Purchase Officer

Authorized Signatory 17/1/2022

Token of Acceptance

Water Conservation Policy at IIST



Indore Institute of Science & Technology

Affiliated to - RGPV (Bhopal) & Approved by - AICTE(New Delhi)

POLICY DOCUMENT ON WATER CONSERVATION

Water Conservation Policy

The Water Conservation policy aims to encourage all personnel of the INDORE INSTITUTE OF SCIENCE & TECHNOLOGY, INDORE to realistically understand the importance of water conservation as well as increase water conservation in college campus through methods that are consistent with a safe and secure environment.

Objectives of Policy:

1. Emphasize water conservation practices across the campus to reduce overall water consumption.
2. Promote the reuse of treated wastewater for non-potable purposes like irrigation, flushing toilets, or cleaning.
3. To increase the recharge of groundwater by capturing and storing rainwater, by rainwater harvesting from rooftops and run-offs.
4. To store the water for gardening & washing purposes.
5. To Reduce wastage of water
6. Cleanliness drive to prevent water runoffs and clogging of waste material into nearby water sources.

Indore Institute of Science and Technology IQAC INDORE

Principal
Indore Institute of Science
and Technology, Indore

Indore Institute of Science & Technology INDORE