



Janseva Shikshan Mandal's

**Shantarambhou Gholap Arts, Science and
Gotirambhou Pawar Commerce College, Shive**

**Tal:-Murbad Dist:- Thane 421 4001
(Affiliated to University of Mumbai)**

**GREEN AUDIT REPORT
(Academic Year 2020-21)**

Name of the Institute :- Janseva Shikshan Mandal's Shantarambhou Gholap Arts,
Science and Gotirambhou Pawar Commerce College, Shive Tal:-
Murbad Dist:- Thane 421 401.

Green Audit Perform by :- Mrs. Apurva Chunade Botanist
B/03 Matruchaya Co.Hsg.Society, Malshej Road, Murbad Dist:-
Thane and Team

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Acknowledgement:

We are grateful to the institution to award this prestigious project and allow us enter the new era of Green Audit in College Campus.

Further we sincerely thank the college staff for providing us necessary facilities and co-operation during the audit. This helped us in making the audit successful.

GREEN AUDIT COMMITTEE 2020-21

Sr. No.	Name	Designation	Sign
1.	Mrs. Apurva A. Chunade M.Sc. Botany	Chairman, Green Audit Expert	
2.	Mr. Vilas M. Suroshe M.Sc. Botony	Expert	
3.	Mr. Pravin V. Vishe B.A	Expert	
4.	Prof. Priya Bhagat M.Sc. Chemistry	Member	
5.	Prof. Deepak Tupare M.Sc. Chemistry	Member	
6.	Prof. Nitin Choudhary M.Sc. Physics	Member	
7.	Prof. Aniket D. Marathe M.Sc. Zoology	Member	
8.	Ms. Monika Suroshe	Student	
9.	Mr. Manish Yashwantrao	Student	

INTRODUCTION TO INSTITUTION:

Shantarambhou Gholap Arts, Science and Gotirambhou Pawar Commerce College Shivle, permanently affiliated to the University of Mumbai, was established in 1989. It is multi-faculty college and offers 11UG (8 Grantable, 3 Non-grantable/ self- financed) and 8 PG Self -financed /Non- grantable programs. UGC has also given 2(f), 12(B) status to the college on 13th April 2000. The college was awarded “Best College” Award in Rural category by the University of Mumbai in the academic year2008-09. The college has also ISO certification 9001:2015. First cycle of NAAC Accreditation was done in 2003 with B+ grade and Second cycle Accreditation was done in 2011 with B grade (2.80 CGPA). The College conducts certificate courses / Value added courses to enrich students with different branches of knowledge. The college has MoUs with various agencies to provide students training for the recruitment of Police and also coaching for Competitive examinations. As the college is located in Rural and Hilly area, various outreach and community oriented programs have been conducted by the college. The college has adequate infrastructure facilities to provide quality education to our students.

Location:

The college is located in rural and hilly area of Murbad Tehshil of Thane District in Maharashtra. All the students are from rural and poor families of the Tehshil.

Management: The College is run by Janseva Shikshan Mandal Murbad (JSM) which runs 14 educational institutes including the college. It has done a commendable and remarkable work in the field of education to uplift the poor society of the area. Honorable Gotirambhou Pawar, the President of JSM, with other members is doing hard work to provide quality and need based /skill based education to the poor people of society.

Vision

Our Vision: To make the society strong through Higher education by combining efforts of the teachers, students and community---“Prajwalita Dnyanmaya Pradipa”.

Mission

Our Mission: To create healthy educational atmosphere to enable students to develop them as intellectual, responsible and ever-ready for personal growth

Green Audit Report 2020-21

Introduction:- Green audit is assigned to with an intention to upgrade the environmental condition in and around the institute. The S.G. Arts, Science & G.P. Pawar Commerce College Shivle, herein appointed committee to serve the purpose. Observations The Land:-The college possesses a land of around 5 acres which belongs to the trust, namely Janseva Shiklshan Mandal Murbad. The land is mainly having very light soil called 'Murum' and rocky at some places. The topography of the land is quite susceptible for erosion.

Building:- The college has several buildings namely, Main building, Commerce building, Library, Ladies hostel, Gymkhana, NSS office, Staff quarters etc.

Landscape:- Apart from buildings the college has developed lush-green lawns measuring 6200 sq.ft. and a carpet has near the central library.

Staff & student strength:- The college has 45 teaching and 38 Non-teaching staff. In 2020-21 there were 1933 students learning in various classes and faculties.

Flora and Fauna:- The college has planted several plants in the vicinity so as to improve the environment and to provide fresh atmosphere. The list of plants is attached in the annexure. Due to pleasant atmosphere considerable fauna is also observed and its list is also attached as annexure.

Water Audit:- As college comprises 2016 staff and students and several number of plants, great quantity of water is required daily. Approximately 30000 litres of water is necessary to suffice the needs. The main source of water is borewell. The water quality is satisfactory. The water was tested by the department of Chemistry of the college. The test report is attached as annexure. Waste disposal Audit:-As there is great consumption of water per day, waste water is developed at toilets and laboratories. The toilet waste water (sewage) is normally taken to the drainage lines and septic tanks. Laboratory waste water is diluted first and then released in drainages. E-waste is disposed by handing it over to concerned people. Energy Audit:-The entire area buildings are provided with electrical energy. In the academic year of 2020-21 total consumption of electricity was much higher. The building consists of 87% traditional lighting devices like tube lights & bulbs etc. Only 13% lighting devices are in LED form. The college central library has a central dome covered with fibre glass and thereby great quantity of sun-light is available through it. This saves lot of electrical energy.

Environment Quality Audit: - As the college is situated in natural pollution free area, the environment is basically pollution free and cool. The department of physics has carried out sound audit of the area and its report is attached herewith.

Health Audit: - The college has great number of plants including large trees so as to keep the organizers regular health camps & vaccination programs. Also the college has made MOU

with Dr. Pankaj Patil and Dr.Charushila Dalvi to visit the college regularly and to deal with the health problems of the students.

Renewable Energy Audit - The College unfortunately does not have any renewable energy plant like solar energy, yet.

Water Analysis Report

Place : Shivle College Campus
Water Source : Borewell Water
Season : Summer Season (15th March 2021 – 30th March 2021)
Water amount Collected : 1 litre
Methods Used :

1. Colour : Whatmann filter paper testing
2. Hardness of water : Titrimetric Analysis using complexometric method
3. Conductance : Using digital conductometer
4. pH : digital pHmeter
5. Alkalinity : Titrimetric Analysis Using Acid–Base Neutralization titration Method
6. Salinity : Titrimetric Analysis using Mohr's Method
7. Turbidity : Turbidometric Precipitation Titration method
8. Total Dissolved Solid (TDS) : Whatmann filter paper testing
9. Total Suspended Solid (TSS) : Whatmann filter paper testing

Sr No.	Properties	Shivle College Water sample values	WHO values	IS : 10500 values
1	Colour	colourless	unobjectionable	unobjectionable
2	Hardness of water	130 ppm	300	300
3	Conductance	248 μ S	NO guidelines	200 μ S - 800 μ S
4	pH	7.8	6.2 to 8.2	6.5 to 8.5
5	Alkalinity	35.4ppm	200 ppm	200 ppm
6	Salinity of water sample	0.586 ppm	5mg/dm ³	250 ppm
7	Turbidity	0.566 ppm	1.5 NTU	200 ppm
8	TDS	0.23 mg/dm ³	300mg/dm ³	500 mg/dm ³
9	TSS	0.021 mg/dm ³	300mg/dm ³	500 mg/dm ³

Conclusion:

The drinking water Parameters have been checked and tested by using standard procedure Methods in Certified Chemistry Lab of Department of Chemistry, and Results are found to be excellent as on the basis of remarks given by IS : 10500 values. The sampled water is found to be potable one.

Analyzed By:

1. Prof. Priya Pankaj Bhagat (M.Sc. Chemistry, NET)
2. Prof. Deepak Ambadas Tupare (M.Sc. Chemistry, NET)

FLORA – Trees

SR. NO.	SCIENTIFIC NAME	COMMON NAME
1	Magnifera indica	Mango
2	Tamrindus indicus	Tamrind
3	Peltoforum ferruginium	Peltoforum
4	Pithocolobium saman	Rain tree
5	Oreodoxa regia	Bottle Palm
6	Polyanthea longifolia	Ashok
7	Cycas revoluta	Cycas

FLORA – Shrubs

SR. NO.	SCIENTIFIC NAME	COMMON NAME
1	Ixora singaporensis	Ixora
2	Duranta plumerie	Duranta
3	Dracaena species	Dracaena
4	Codaeum varigatum	Croton
5	Diffenbakia species	Diffenbakia
6	Aglonema species	Aglonema
7	Caesalpinia pulcherima	Caesalpinia
8	Ficus species	Ficus
9	Lantana camara	Lantana
10	Hamelia patens	Hamelia
11	Thuja orientalis	Thuja
12	Aralia species	Aralia
13	Maynia species	Mayenia
14	Hibiscus rosa-sinesis	Hibiscus

FLORA – Cacti

SR. NO.	SCIENTIFIC NAME	COMMON NAME
1	Agave species	Furkrea
2	Tradescantis bicolor	Tradescantia
3	Z.pendula	Zebrine
4	Pedilanthus species	Pedilanthus

AVIAN FAUNA

SR. NO.	SCIENTIFIC NAME	COMMON NAME
1	Passer domesticus	House Sparrow
2	Corvus splendens	House Crow
3	Corvus macrorhynchos	Jungle Crow

4	<i>Acridotheres tristis</i>	Common Myna
5	<i>Acridotheres fuscus</i>	Jungle Myna
6	<i>Sturnia pagodarum</i>	Brahmini Starling
7	<i>Pastor roseus</i>	Rosy Starling
8	<i>Petronia xanthocollis</i>	Chestnut-shouldered Petronia
9	<i>Psittacula krameri</i>	Rose-ringed Parakeet
10	<i>Turdoides Striata</i>	Jungle Babler
11	<i>Chrysomma sinense</i>	Yellow-eyed Babler
12	<i>Prinia inornata</i>	Plain Prinia
13	<i>Prinia socialis</i>	Ashy Prinia
14	<i>Orthotomus sutorius</i>	Common Tailorbird
15	<i>Merops orientalis</i>	Green Bee-eater
16	<i>Cinnyris asiaticus</i>	Purple Sunbird
17	<i>Leptocoma zeylonica</i>	Purple-rumped Sunbird
18	<i>Zosterops palpebrosus</i>	Oriental White-eye
19	<i>Saxicoloides fulicatus</i>	Indian Robin
20	<i>Copsychus saularis</i>	Oriental Magpies Robin
21	<i>Ploceus philippinus</i>	Baya weaver
22	<i>Saxicola maurus</i>	Siberian Stonechat
23	<i>Saxicola caprata</i>	Pied Bushchat
24	<i>Anthus trivialis</i>	Tree Pipit
25	<i>Babulcus ibis</i>	Cattle Egret
26	<i>Pseudibis papillosa</i>	Red-naped ibis
27	<i>Lanius schach</i>	Long-tailed Lark
28	<i>Ammomanes phoenicura</i>	Rufous-tailed Shrike
29	<i>Caracias benghalensis</i>	Indian Roller
30	<i>Motacilla flava</i>	Western Yellow Wagtail
31	<i>Lonchura punctulata</i>	Scaly-brested Munia
32	<i>Ptyonoprogne concolor</i>	Dusky Crag-Martin
33	<i>Hirundo smithii</i>	Wire-tailed Swallow
34	<i>Apus affinis</i>	Little Swift
35	<i>Hirundo rustica</i>	Red-rumped Swallow
36	<i>Pycnonotus cafer</i>	Red-vented Bulbul
37	<i>Megalaima haemacephala</i>	Coppersmith Barbet
38	<i>Centropus sinensis</i>	Greater Coucal
39	<i>Eudynamys scolopaceus</i>	Asian Koel
40	<i>Hierococcyx varius</i>	Common Hawk Cuckoo
41	<i>Clamator jacobinus</i>	Pied Cuckoo
42	<i>Columba livia</i>	Common Pigeon

43	<i>Spilopelia senegalensis</i>	Laughing Dove
44	<i>Spilopelia schinensis</i>	Spotted Dove
45	<i>Streptopelia decaocto</i>	Eurasian Collared Dove
46	<i>Oriolus kundoo</i>	Indian Golden Oriole
47	<i>Dicrurus macrocercus</i>	Black Drongo
48	<i>Rhipidura albogularis</i>	Spot-breasted Fantail
49	<i>Ficedula parva</i>	Red-breasted Flycatcher
50	<i>Vanellus indicus</i>	Red-wattled Lapwing

REPTILES

SR. NO.	SCIENTIFIC NAME	COMMON NAME
1	<i>Naja naja</i>	Indian Spectacled Cobra
2	<i>Bangarus caeruleus</i>	Common Krait
3	<i>Daboia russelii</i>	Russell's Viper
4	<i>Ptyas mucosa</i>	Indian Rat Snake
5	<i>Eryx conicus</i>	Common Sand Boa
6	<i>Lycodon aulicus</i>	Common Wolf snake
7	<i>Calotes versicolor</i>	Garden Lizard
8	<i>Eutropis multifasciata</i>	Common Skink
9	<i>Hemidactylus brookii</i>	Brook's Gecko

Noise Analysis Report

Academic Year 2020-21

- ❖ **Aim:** The aim of this study is to determine the noise level inside the S. G. Arts, Science. and G. P. Commerce. College, shivle, campus area.
 - ❖ **Settings and Design:** Different locations were selected for measuring noise levels during this study; like inside college campus area for different location, canteen and bus stop from the distance near about 10m to 15m.
 - ❖ **Materials and Methods:** Levels of the college campus noise pollution were measured at two different dates like 15- July-2020, 10- October-2020, 12- December-2020 and 25-March-2021 of the academic year 2020-2021; during study days, final exams and the recess periods.
 - ❖ **Statistical Analysis Used:** Results of this research were statistically and graphically analyzed by Environment (Protection) Rules, 1986.
- **Standard values of Noise Level According to their Area by Environment(Protection) Rules,1986 as given below**

Code	Area	Day Time	Night Time
A	Industrial Area	75	70
B	Commercial Area	65	55
C	Residential Area	55	45
D	Silence Zone	50	40

Table 1: Standard values

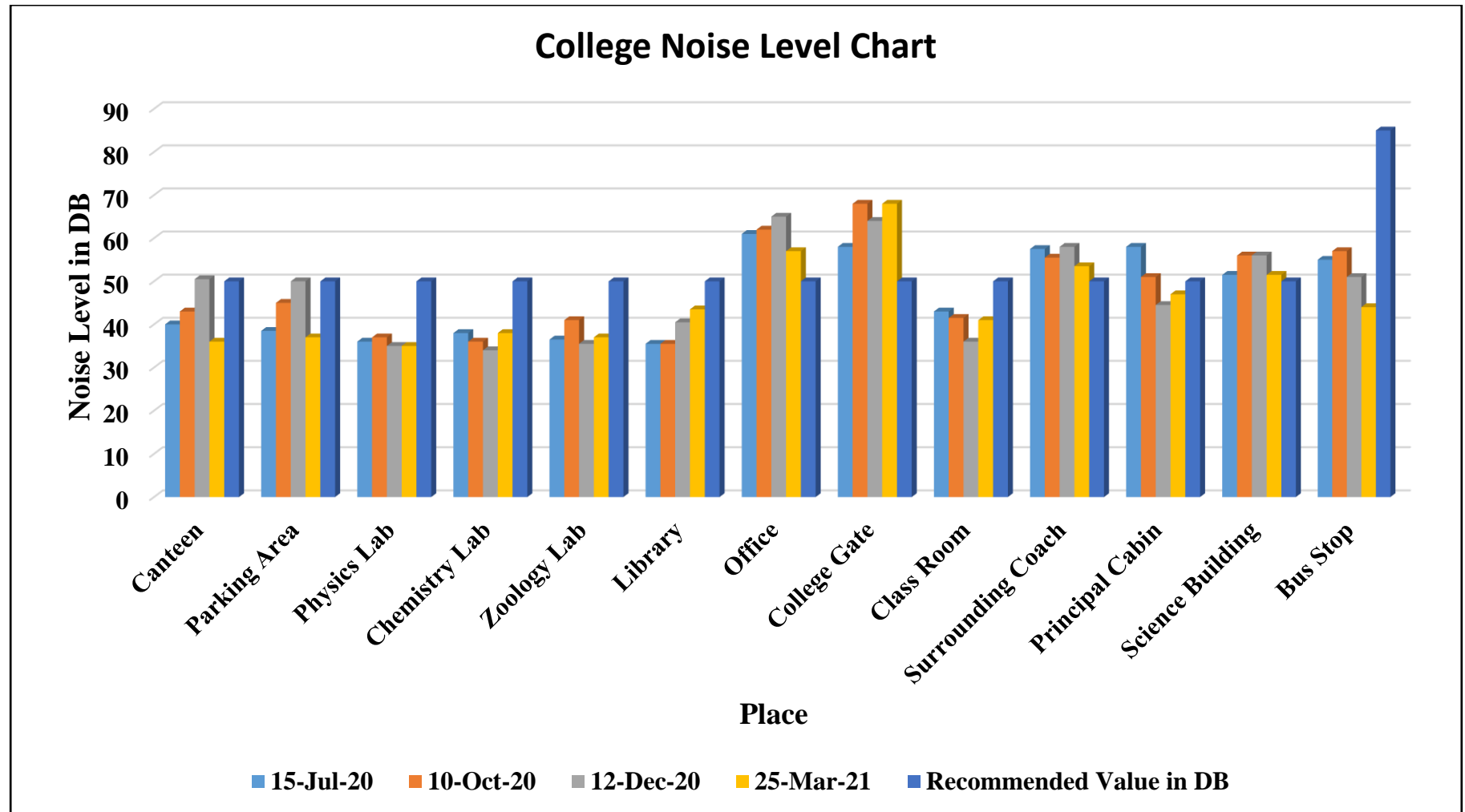
- ❖ **Observations:** In early 2020, the COVID-19 pandemic spread worldwide. Local, regional, and national governments stepped in to attempt to control the spread of COVID-19 with varying degrees of action, ranging from inaction to different levels of restrictions, to near-complete lockdowns. These restrictions and lockdowns disrupted traffic patterns, commercial activities, and social and cultural events in college ways that are unprecedented. Naturally, these changes in human activity patterns had an observable effect on college campus sound environments.

➤ **Observation table to measured sound level in Santarambhau Gholap Art's, Science and Gotirambhau Pawar Commerce College, Shivle, Tal- Murbad.-**

Date			15-Jul-20			10-Oct-20			12-Dec-20			25-Mar-21			Actual Value		
Sr. No	Place	Time (AM/PM)	Maximum Value DB	Minimum Value DB	Mean Value	Maximum Value DB	Minimum Value DB	Mean Value	Maximum Value DB	Minimum Value DB	Mean Value	Maximum Value DB	Minimum Value DB	Mean Value			
1	Canteen	10:30	48	32	40	50	36	43	55	46	50.5	40	32	36	50		
2	Parking Area	10:45	43	34	38.5	48	42	45	56	44	50.0	40	34	37	50		
3	Physics Lab	11:00	40	32	36	42	32	37	40	30	35.0	42	28	35	50		
4	Chemistry Lab	11:10	42	34	38	40	32	36	38	30	34.0	46	30	38	50		
5	Zoology Lab	11:25	43	30	36.5	44	38	41	39	32	35.5	43	31	37	50		
6	Library	11:45	38	33	35.5	40	31	35.5	45	36	40.5	49	38	43.5	50		
7	Office	12:05	65	57	61	67	57	62	70	60	65.0	61	53	57	50		
8	College Gate	12:20	62	54	58	72	64	68	69	59	64.0	71	65	68	50		
9	Class Room	12:35	46	40	43	45	38	41.5	40	32	36.0	45	37	41	50		
10	Surrounding Coach	01:20	62	53	57.5	58	53	55.5	61	55	58.0	58	49	53.5	50		
11	Principal Cabin	01:30	62	54	58	55	47	51	49	40	44.5	52	42	47	50		
12	Science Building	01:50	57	46	51.5	59	53	56	60	52	56.0	55	48	51.5	50		
13	Bus Stop	02:20	58	52	55	64	50	57	58	44	51.0	48	40	44	85		
			Mean Value			46.81	Mean Value			48.35	Mean Value			47.69	Mean Value		45.27

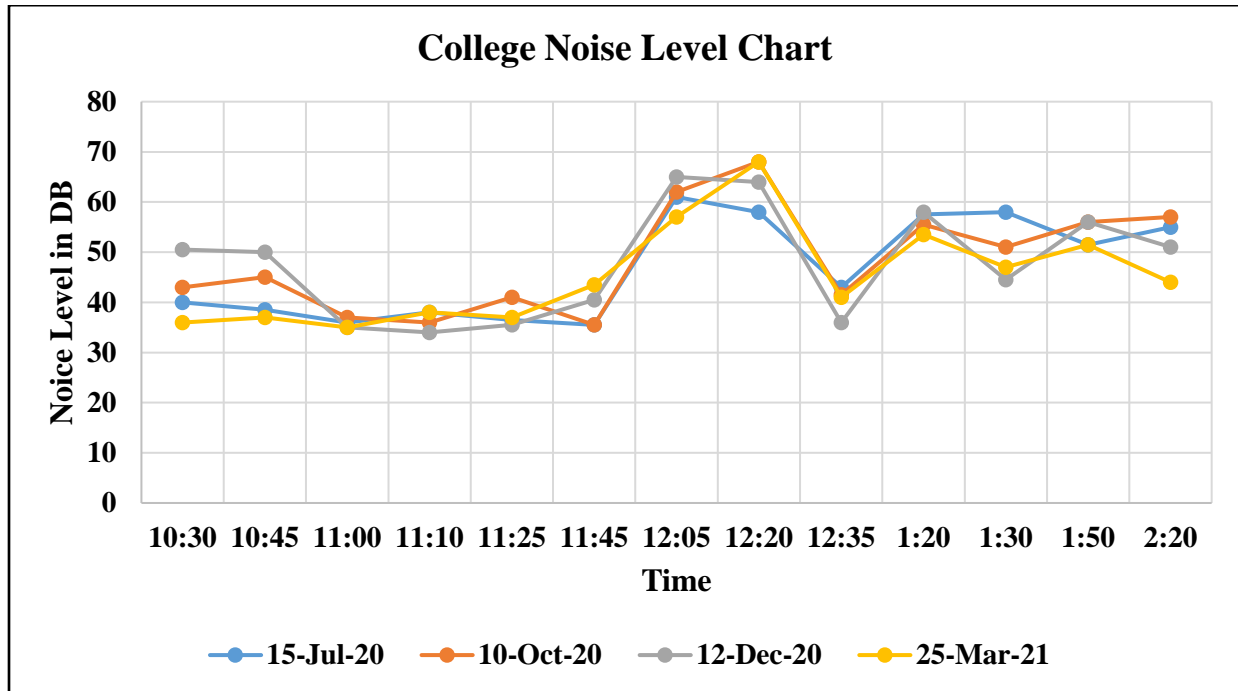
Table 2: Noise level four different dates in academic year 2020-21

➤ **Comparison between Observed Value and Recommended Value in DB Unit**



Graph 1: Noise level graph for four different dates in academic year 2020-21

➤ Graph for Place versus Observed Sound Level



Graph2: College noise level line chart

❖ Results:

Average noise level between different two days: 47 db. (approx.)

Levels of noise of the college campus were slightly less than standard sound limit at all periods. Inside the campus, levels of noise were the lower at locations that are characterized by the high traffic movement. In addition, the highest level of noise was recorded during the office time period and also college gate.

❖ **Conclusion:** Noise pollution is considered to be the third most hazardous pollution after air and water pollution by the World Health Organization (WHO). In college campus levels of noise of four different dates of the college campus were nearly the same or very slightly less than their guideline values. But, In pandemic situation arises in academic year 2020-21, a significant reduction in average equivalent sound and minimum sound levels was observed at all campus during the lockdown period and this can be attributed to reductions in both road sound and less number of college student.

(Asst. Prof. Nitin Suryakant Choudhari)
M.C.A., M.Sc., NET, B.Ed
Department of Physics, Shivle College

Suggestions

- 1) More plantation may be done to cover the entire open land and to save soil erosion.
- 2) The college should have a rain water harvesting system to have water for plants and general cleaning
- 3) The college should switch over to LED lamps, as early as possible, to save electrical energy
- 4) The college should have solar system to replace the traditional electrical energy
- 5) The college should arrange scientific waste disposal system, particularly for hazardous chemicals from laboratories
- 6) Percolation pits may be dug to drain out waste water.
- 7) Composting pits should be dug for decomposable natural waste.
- 8) Grass mulching should be used to trees to reduce their water demand.
- 9) Environmental education programs should be arranged both for the students and the society

Place: - Shivle

Date:-

(Dr. Apurva chunade)