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Green Audit Certificate

Awarded to St. Aloysius College, Jabalpur for completing the Green Audit for the academic year 2019-2020, demonstrating commitment to environmental sustainability, and proactive engagement in eco-conservation practices.

Date of Audit: October 5, 2020

Key Achievements:

- Effective management of solid waste through initiatives like vermicomposting.
- Implementation of a plastic-free zone to reduce plastic usage across the campus.
- Promotion of health and hygiene through various innovative community outreach programs.
- Establishment of a tobacco-free college premises.

Highlights from Eco Conservation Efforts:

- Maintenance of a green and clean campus.
- Encouragement of Reduce, Reuse, and Recycle practices.
- Active involvement in community education and awareness programs about environmental conservation.

Recommendations for Future Improvements:

- Enhance the scope of recycling initiatives to include more materials.
- Increase student and faculty participation in ongoing environmental sustainability programs.
- Continue expanding the green coverage of the campus through more aggressive plantation drives.

Certificate Issued by: Maneush Henra

Awaneesh Nema & Associates

Date of Issue: 25-Oct-2020

Green Audit 2019-20

The report of Green Audit of St. Aloysius College for the academic year 2019-20 was submitted by a team of three members from Nature Club

- Dr. Shikha Bansal (Head, Botany)
- Dr. Sonali Nigam (Asst. Prof., Botany)
- Dr. Femina Sobin (Asst. Prof., Botany)

It encompasses the efforts in fostering a sustainable and health-conscious campus environment by the institution.

The report details initiatives under three primary categories:

- 1. **Green and Clean Campus** Emphasis on maintaining a plastic-free and tobacco-free environment, along with significant tree plantation activities.
- 2. **Eco-friendly Practices** Implementation of the reduce, reuse, and recycle principles through various educational and operational measures.
- 3. **Health and Hygiene** Organization of health camps and hygiene awareness programs to promote public health both on campus and in the surrounding community.

This document also highlights the innovative educational outreach and community engagement activities undertaken by the college to enhance environmental awareness and public health.

Conservation Monitoring Report

"Eco Conservation Monitoring Team" of St. Aloysius' College (Auto.) is intended to monitoring, managing and maintenance of the campus to create awareness not only within the Aloysian family but also in the contiguous locality for safe environment. The team prepares Eco Conservation monitoring Report under three broad aspects –

- 1. Green and Clean Campus
- 2. Eco-friendly approach: Reduce, Reuse and Recycle
- 3. Health and Hygiene

These three aspects were accomplished under following features -

- Green and clean campus
- Plastic free zone
- Reduce, Reuse and Recycle
- Tobacco free college premises
- Health and Hygiene

The Eco Conservation Monitoring Team is committed to teach and propagate awareness about various environmental concerns by organizing road shows, drives, value education, mentoring, training programmes, lectures, seminars and workshops to entire Aloysian family and adjoining society.

Outcome

Green and Clean Campus

 Water Quality of college campus was analyzed on Chemical, Physical and Microbiological Parameters as a part of add on course 'Water Quality and Monitoring' organized by Department of Botany and Microbiology (12 September, 2019-09 January, 2020).

- Microbial assessment of air quality was done by students of B.Sc. final year (Industrial Microbiology).
- An Open Discussion was conducted for the students on topic "परमाणुनिशस्त्रीकरण" on October 29, 2019.
- Dr. Deepti S. Deshpande participated in the 8th International Conference on 'Innovative Research Practices in Pharma, Science Management, Agriculture and Technology' held at Swami Vivekanand University, Sagar on 27-28 February 2020. In this conference our student, Mr. Rishabh Sharma (M.Sc. Final Year) had also presented his research paper (Oral Presentation).
- A Poster Competition on issues like Motor Vehicle Act and Cleanliness were held on 18 October 2019 by Department of Political Science.
- Dr. Manju Gupta has presented a paper entitled "Role of Higher Educational Institutes in Promoting Environmental Sustainability; Concept of Green Institute".
- Green Good Deed- Environmental awareness was created by distributing green indoor plants in earthen pots to the Principal, Deans and HODs of different departments.
- Students of Nature Club developed vertical garden on college terrace.
- B. Sc. III Year students of Industrial Microbiology did internship on Skill Development based on 'Biofertilizer'.
- Ornamental Crop Culture Technology: Rose Plantation: Faculty members of the Department of Botany and Microbiology gave an input on the objectives and methodology of ornamental crop culture technology to the student members of Nature Club. This was followed by the plantation of rose saplings and many other ornamental seasonal plants in the college garden to enhance the green and clean ambiance of the campus.
- A paper entitled "Studies on Physio-chemical parameters of Ganga, Sai and Bakulahi rivers water in Pratapgarh District (U.P.)" was published in Journal of Biological and Chemical Research in May 2019.
- Dr. Shweta Likhitkar published a paper entitled "Fluoride ion Concentration in Ground

Water a Major Concern: Pratapgarh District, Uttar Pradesh" in International Journal of Research and Analytical Reviews, June 2019.

- A research article titled "Study of Bio indicators for the Environmental Pollution" was published by Mrs. Yasmin Banu in International Journal of Emerging Technologies and Innovative Research.
- Mr. Enosh Phillips attended a National Conference BIOMILAP organized bySam Higgin bottom University of Agriculture, Technology and Sciences (SHUATS), Prayagraj and presented a paper on "Algal Nanotechnology for Biofuel Production". The theme of the Conference was "Recent Advances in Agriculture, Food Tech and Human Health", he also published book chapter in "Springer Nature", Singapore titled "Algal Butanol Production."
- The Cadets and NCC Officers had actively conducted Tree Plantation and rallies for "SwachataAbhiyan".
- On 22cSeptember 2019 the project work was done by NSS students to provide clean drain as well as mud ballast.
- NSS Students painted the walls to make people aware to use dustbins on 28 July 2019 at Pipariyakalan village.
- The NSS students and Shri Ashok Rohani, MLA Cant. planted trees with a motive to 'Save Trees' on 11August 2019 at Bitoli Village.
- Students were trained in development of **vertical garden and terrariums** in certificate course on "Approaches and application of biodesign", to invoke love for nature and understanding the functioning of ecosystem
- Ashoponics is an innovative initiative of students of B.Sc. III year (Botany) undertaken in internship programme with Design Innovation Centre. In Hydroponics, plants are cultivated in water containing Hoagland medium (contains nutrients like macronutrients, micronutrients and essential elements for plant growth). This method is suitable to grow plants in soilless medium. As it can be performed in small areas without soil, people who do not possess ample land can opt this method for cultivation. The artificial and commercial

Hoagland medium is expensive and not in reach of common man.

Ashoponics is nutrient replacement for Hoagland medium, made of plants itself. It is cheaper and can be made by any individual at home. Two Ashoponics products named Bio FI (for indoor plants) and Green-oh-green (for outdoor leafy vegetables) have been developed by student. These products apart from fulfilling the nutrient requirement also serve the purpose of biopesticides. A total of 48 students have worked hard to develop this product.

Plastic Free Zone

- Use of plastic products were discouraged to make the campus plastic free.
- All the assignments were prepared without using plastic files and folders.
- Plastic disposable cups and plates were discouraged in college canteen; instead paper plates and cups were promoted.
- Bringing polythene carry bags in campus was also discouraged.

Reduce, Reuse and Recycle

- Under the banner of the "Faculty of Physical Sciences", the Department of Computer Science organised an Intercollegiate and an Interschool Competition named "Aagaz-2019" with the motto "Thrust for Innovation". In this event, the department organized activities on E-Waste Management. Approximately 600 students had participated from various institutions.
- The Department of Botany and Microbiology organized a two days Narmada National youth parliament on "Sustainable Future: Measures for tomorrow". More than 600 participants from 50 different schools and colleges of country participated in this event (16-17 Nov 2019).
- A research article titled "Bioremediation: Features, Strategies and Its Current Status in India", was published by Mr. Nitin Swamy in the International Journal of Emerging Technologies and Innovative Research.
- Zoomania 2019-2020 was organised by department of Zoology under the banner of "Srijan" for the UG & PG students, best out of waste competition was organized.

- Internship training on "Vermicomposting as sustainable practice for solid wastes management in Jabalpur city" was organised for M.Sc. IV Semester from 23 January to 28 March 2020. Total 13 students were enrolled for the training programme.
- Dr. Manju Gupta delivered an invited talk on "Advancement of Science and Green Chemistry" at Delhi Public school, Jabalpur on 28 February, 2020.
- Guest Lecture Organised- Special lecture on 'An Overview of Organic Synthesis" for postgraduate course was organised in the month of October by Prof. MVRK RAO, Retired Professor, Government PG College, Rajmundari, Andhra Pradesh.
- A paper entitled Green Synthesis of Silver Nanoparticles using Ocimum sanctum (Tulsi) leaf extract: Characterization, Antibacterial and Catalytic activity was accepted the in Journal of Biological and Chemical research.
- EcoFest: 2020: The Department organised Eco-fest under the banner of Srijan 2020 with the theme 'Sustainable environment and its conservation'. The specific theme for the Eco-fest was 'Plan for the Planet: For life on earth'. All the UG and PG students of
- Bioscience faculty enthusiastically participated in four activities organized by the department *viz*. Poster competition with the theme 'Role of women education in environmental sustainability'; Collage competition on the topic 'Environmental sustainability; Imagery writing on the theme 'Plan for the Planet: for life on earth and Designer eco-friendly bag making competition.

Health and Hygiene

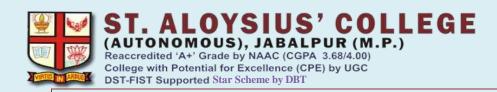
- Blood donation camp was organized on 19th October 2019 by NCC and Red Cross society.
 Students and teachers donated 257 units of blood. NCC Cadets and NSS students have been actively volunteering and donating blood whenever required.
- On 21 September 2019 an awareness programme on nutrition was held in St. Aloysius' College by NSS.
- Two students Anshul Dubey and Himesh Namdeo of M.Sc. Microbiology, participated in a National bio- entrepreneurship Competition organized by C-CAMP and BREC. They

| quali | ied state level and went to Regional level for paper presentation in Delhi Aerocity. | |
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- They presented a poster at state level and orally presented paper entitled "Bacterial vaccines against tuberculosis".
- Netradaan Jagrukta- A talk on eye donation was organised at St. Aloysius College (Auto.), Jabalpur by the Women Cell on 27 August 2019. The gathering was addressed by Dr. Pawan Sthapak (Member of Indian Medical Association Madhya Pradesh, Jabalpur) and member of Dada Virendrapuriji Maharaj Netra Bank. The students were made aware about the conditions required for eye donation which is considered to be one of the noble acts after blood donation. The talk was attended by more than 180 students.
- AIDS Awareness Programme was organised by the students of B.Ed. I semester on 2nd
 December, 2019 to spread awareness about the dreaded disease.
- Students were encouraged by Nature club to spend some time in cleaning of college campus and surroundings to explain them the benefits of maintaining hygienic conditions. Composting bins were placed at respective sites of the college such as garden, campus, etc.
- A National Webinar was conducted on "COVID-19: Implications for Value System, Politics and Education" on 24May 2020.
- Faculty members and PG Zoology students organised Health Awareness Programme and celebrated "World Mosquito Day" under Aloysian Zoological society on 24 August 2019 at Government Natthumal Girl's Higher Secondary School, Gorakhpur, Jabalpur. Hemoglobin percentage of 66 girl students were checked. To mark the "World Mosquito Day", a short film on malaria control was also shown to aware the students.
- Life Science faculty department of zoology organised Two days online National conference entitled "Life science challenges and opportunities: Covid-19 Pandemic on 1- 2 June 2020.

Others

- Department of Botany and Microbiology published quarterly newsletter named 'Nature' addressing issues like environmental concerns, environment conservation, etc.
- All the faculty members of the department of Biotechnology along with M.Sc. students visited the Plant Tissue Culture lab of Shri Mukund Biotech, Majhita and TFRI. Students



got to learn the basics of Plant Tissue Culture techniques on a commercial level. Plant Tissue Culture is a technique used to grow mature plants quickly and in bulk. Those plants whose seeds have fewer chances of germination, poor pollination, rare variety and genetically modified are grown by this technique.

- This year, the Department Biotechnology also introduced a new skill based Certificate Course on Plant Tissue Culture. Total 17 students were trained and were awarded certificates.
- Mrs. Yasmin Banu attended a National Conference BSADFI-2019 organised by AKS
 University Satna, M.P. along with the M.Sc. students of final year and presented a poster on
 Agricultural Biotechnology. The theme of the Conference was "Biotechnology and
 Sustainable Agriculture in Doubling of Farmer's Income by 2020".
- UG students and faculty members participated in a Workshop on "Faunal Diversity of Central Highlands, India" organised by Zoological Survey of India, Central Zone Regional Centre, Jabalpur on 25 October 2019.
- Zoomania 2019-2020 was organised by department of Zoology under the banner of "Srijan" for the UG & PG students to nurture their creativity, skills, and talents. Wild life photography competition was conducted.
- Faculty members and PG Zoology students visited Dumna Nature Reserve on 5 March 2020 for Local Birds Survey and Biodiversity Awareness Programme.