

POLICY
ON
WASTE MANAGEMENT AND
GREEN INITIATIVES

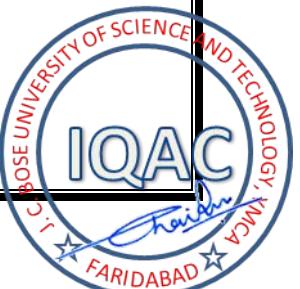


**J.C. BOSE UNIVERSITY OF SCIENCE AND TECHNOLOGY,
YMCA, FARIDABAD**

(Formerly YMCA University of Science and Technology)

NAAC 'A' Grade accredited State University

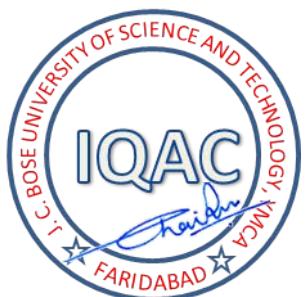
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Approved in 37th EC Meeting dated 22/04/2020

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1 PREAMBLE

The policy on ‘**Waste Management and Green Initiatives**’ formulated in response to University’s commitment to clean environment. The University realizes the need of sustainable and circular approach essential in reducing its ecological footprint and providing a safe and healthy work environment for teaching and non-teaching employees, students and surroundings.

The University has a responsibility to ensure that the campus wastes are disposed through proper waste segregation at source and if possible, converting those into value added eco-friendly products. Furthermore, it is realized that suitable eco-friendly practices/technologies should be adopted for reducing the environmental impacts of human activities. This would be in line with the Sustainable Development Goals (SDGs) as well as Environmental laws and legislations laid by the government.

The purpose of this policy is to establish objectives and targets, provide the context for suitable action plans and facilitate their implementation. These shall revolve around the 4Rs (Reduce, Reuse, Recycle and Recover) aspect of waste management focussed on campus waste, in addition to their minimization, environmentally sound management and active promotion of green initiatives through community engagement.

The policy inter alia takes cognizance of the various environmental regulations such as The Air Act, Water Act, Environmental Protection Act and the National Environmental Policy of 2006 along with different rules framed by the State and Central Government from time to time.

2 POLICY STATEMENT

The University recognizes the need for protection of the natural environment within the built environment and incorporates it as an integral part of good institutional practices. To achieve this, the university shall develop, implement and sustain an Environment Management System which would lead to sustainable development and advance positive effects on both human health and the natural environment for university community and the surroundings.

- 1) The University will adopt the principles of best environmental practices as reasonably possible in the delivery of its waste management services and ecological initiatives.

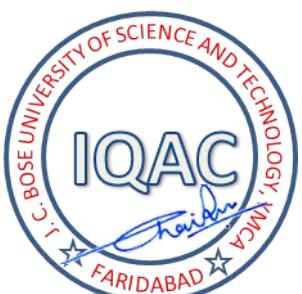


- 2) The University will apply a ‘**waste hierarchical approach**’, to reduce, reuse, recycle and recover waste products to manage its waste responsibly, reduce the volume of waste sent to landfill and maximise reuse and recycling where possible.
- 3) The University will promote water conservation and energy use efficiencies through effective programs and practices. The university will undertake possible efforts to reduce environmental footprints from university related activities via use of cleaner and eco-friendly practices/technologies.
- 4) The University recognizes the importance of compliance with applicable environmental laws and regulations as laid down by the government.
- 5) The University will review the environmental objectives and targets from time to time in order to minimize resource consumption and improve environmental performance.
- 6) The University will communicate this policy to every stakeholder.
- 7) The University requires that all the employees, students or anyone else making use of the premises comply with the environmental objectives set in the policy and associated Environmental Management System for upholding the spirit of the document and ensure compliance with all environmental legislations.

3 POLICY OBJECTIVES

The objectives of this policy are to:

- 1) Promote holistic approach of waste management, resource conservation and green initiatives at the university campus.
- 2) Ensure that waste management is performed at university campus in line with all waste legislative requirements.
- 3) Encourage judicious use of environmental resources to meet the needs and aspirations of the present and future generations.
- 4) Provide clearly defined roles and responsibilities to identify and coordinate each activity related to waste management and green initiatives.
- 5) Disseminate environmental awareness among students and staff members.



4 ORGANISATION AND MANAGEMENT

The responsibilities and management for the ‘Waste Management and Green Initiatives Policy’ are shared among variety of personnel within the University. The structure shall be as provided in the succeeding sections.

4.1 Advisory Board

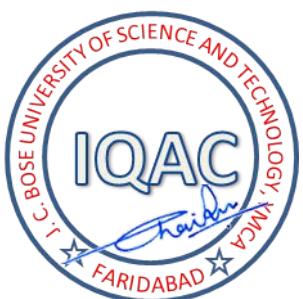
An advisory board shall be constituted with the following organization structure:

- 1) Vice-Chancellor - Chairman
- 2) Registrar
- 3) Two Deans (to be nominated by the Vice-chancellor)
- 4) Chairperson (Department of Environmental Sciences)
- 5) Two Faculty member from Sciences Department (to be nominated by the Vice-chancellor)
- 6) Two Faculty members from Engineering Departments (to be nominated by the Vice-chancellor)
- 7) Two Faculty members from Management/Humanities Departments (to be nominated by the Vice-chancellor)
- 8) Executive Engineer
- 9) Two Outside Experts (need based) (to be nominated by the Vice-chancellor)
- 10) Coordinator -Member Secretary (to be nominated by the Vice-chancellor)

4.2 Functions of the Advisory Board

The advisory board shall assume office on the date of publishing this document with the following roles:

- 1) Abide by this Policy Document in value and spirit.
- 2) Advise and coordinate the provision laid in the Campus Waste Management and Green Initiatives at the campus.
- 3) Guide and provide directions to the implementation of initiatives for environmental conservation in the field of waste, water and energy.
- 4) Ensure that all stakeholders are advised that they must comply with the University’s Waste Management and Green Initiatives Policy.



- 5) Set up a Green Cell of the University for monitoring and supervising the activity components of the policy document.

4.3 Responsibilities

A) Heads of Departments/Directors/Section In-charge

They shall have the following responsibilities

- 1) Abide by this policy document in value and spirit
- 2) Ensure that waste is disposed responsibly in their premises through the appropriate waste disposal system (such as segregation of waste and 4Rs), in accordance with University policy and procedures.
- 3) Ensure that all stakeholders in their respective department are aware of the procedures/practices about waste management and green initiatives formulated in the policy.

B) Students/Staff members:

- 1) Abide by this policy document of the University in value and spirit.
- 2) Dispose the waste responsibly (at both office and residence), through the appropriate waste disposal system (segregation of waste), in accordance with University policy and procedures.
- 3) Promote peer to peer understanding and appreciation of natural environment
- 4) Report any challenges or problems in implementation of waste management and green initiatives to the Head of Department.

5 POLICY FOR WASTE MANAGEMENT

5.1 Solid Waste Management

The University shall apply a ‘Waste Hierarchical Approach’, to reduce, reuse, recycle and recover waste products to manage its waste responsibly, reduce the volume of waste sent to landfill and maximise reuse and recycling where possible.

Action Plan:

- 1) **Waste Avoidance and Minimization** - In the hierarchy of waste management, waste avoidance and waste minimization have to be attempted first, for which dissemination of information on technological options should be a continuing exercise.



- 2) **Segregation of Solid Waste at Source** - Waste generators would have to segregate waste into two streams – Biodegradable and Dry waste (Plastic, Paper, metal, Wood, etc.) before handing it over to the collector as mentioned in Solid Waste Management Rules, 2016 laid by Government of India.
- 3) **Reuse and Recycling** - The recyclable material like plastic, tin, glass, paper and others should be handed over either to authorised waste-pickers and recyclers or to the urban local body.
- 4) **Solid Waste Processing and Disposal** - It is advised that the bio-degradable waste should be processed, treated and disposed of through composting or any other suitable process/technology within the premises as far as practically possible and the non-biodegradable wastes shall be disposed through a responsible waste collector or agency as directed by the local authority.

5.2 Water and Wastewater Management

The university shall undertake its best efforts for;

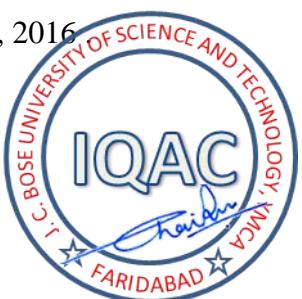
- 1) Conserve water through efficient fixtures as well as adopt rain water harvesting.
- 2) Minimise wastage of water in campus.
- 3) Treat or dispose wastewater originating from university activities in a sustainable manner as per applicable guidelines by CGWA and NGT.
- 4) Ensure that the treated effluent may be recycled for irrigation and other purposes.

Action Plan for Liquid Waste Management:

The Liquid waste from the campus consists mainly of domestic sewage from different establishments within the campus. A techno-economic feasibility study can be initiated for arriving at an appropriate solution for establishing Sewage Treatment Plants (STPs). The effluent water can be utilised for landscaping and non-potable use.

5.3 E-waste/Hazardous waste/Biomedical Waste Management

The e-waste/Hazardous waste/Biomedical Waste originating at university premises shall be managed as per the policy or regulations laid down by Central and state government such as E-Waste Management Rules 2016, Hazardous and Other Wastes (Management and Trans boundary) Rules 2016 and Biomedical Waste Management Rules, 2016



Action Plan:

- 1) All the departments may be required to carry out an inventorisation of items which could possibly be classified in e-waste in the next 3, 6 and 12 months from the date of current usage.
- 2) An e-waste collection centre may be established for obtaining e-waste from different departments.
- 3) Suitable authorised vendors by the Central Pollution Control Board and willing to offload the e-waste from the campus would be invited for an auction of the e-waste.

6 GREEN INITIATIVES AT UNIVERSITY PREMISES

6.1 Green Audit

The university shall make arrangements to undertake a comprehensive Green Audit of the existing structures and work operations annually to identify, quantify, describe and prioritize framework of Environment Sustainability in compliance with the applicable regulations, policies and standards.

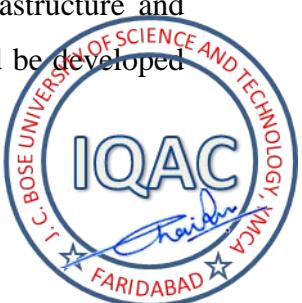
The objective of the green audit is to improve energy and water usage efficiency, better waste management and all round management and development of campus in eco-friendly manner for sustainable future.

The Green audit may consist of following broad points:

- 1) **Water audit** – water balance consisting of source, consumption and recycling.
- 2) **Waste audit** – inventorisation of municipal solid waste, hazardous wastes, biomedical wastes and sources thereof, compostable fraction of wastes, segregation of wastes, present practice on waste management inside campus.
- 3) **Energy audit** - inventorisation of electrical fittings, fixtures, appliances, machines, etc., energy consumption, recognise energy wastage and leakage points.
- 4) **Biodiversity** – green cover mapping, tree counting, biodiversity register.

6.2 Green Master Plan

Since there is a need to augment the infrastructure on the campus, it becomes equally critical to ensure that the master plan is compliant with environmental norms and/or at least, GEM (ASSOCHAM)/IGBC/GRIHA compliant. The upcoming infrastructure and facilities as well as additions to the existing structures and facilities should be developed



with a focus on energy efficiency, minimizing waste generation, optimizing power consumption of power, water and other supplies.

6.3 Energy conservation

The university will do maximum efforts to reduce energy consumption and use renewable sources of energy as far as possible.

Action Plan:

- 1) The points of energy wastage and leakage should be identified and appropriate steps shall be taken to set a target of attaining significant energy saving by appropriate modifications and adopting best practices.
- 2) The fluorescent lights may be replaced with LED in the existing buildings and street lights across the campus.
- 3) Use of renewable sources of energy should be increased either by installing solar panels on rooftops as well as suitable open places or by other suitable means.

6.4 Water Management Plan for Optimum Usage of Water

The university shall adopt a sustainable water management plan to prevent wastage of water as well as recycle and reuse wastewater in the university campus.

Action Plan:

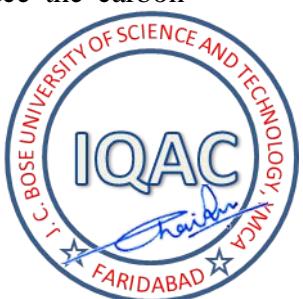
- 1) Reduction of potable water usage by efficient monitoring, using efficient fixtures and restricting usage for irrigation.
- 2) Installation of rainwater harvesting units at suitable locations in campus.
- 3) Use of Sustainable horticultural practices.

6.5 Reduction of Carbon Footprints

The university shall do possible efforts to reduce carbon footprints from university related activities via plantation drives and use of cleaner and eco-friendly methods.

Action Plan:

- 1) A methodology of calculating the carbon footprints of the whole institute should be developed and its improvement should be monitored.
- 2) Tree plantation drives on and off campus should be initiated to reduce the carbon footprints.



- 3) Provisions should be made to motivate the staff and students for using bicycles, public transport and/or car pool at least once a week for routine transportation.

6.6 Plastic free campus (avoid using single use plastic)

The university shall make provisions to ban the use of single use plastic at university premises. Various awareness programmes may be initiated to motivate the staff, students and people in surrounding areas to phase out single use plastic from their schedule.

6.7 Biodiversity, Plantation and Landscaping of Campus

Proper documentation of the flora and fauna at university premises should be done with the help of experts. Further, plantation should be done in a planned manner with expert advice to add both green cover and beauty to the campus. Landscaping of different sizes may be done at suitable open spaces with flowering plants, grass and accessories targeting towards the most beautiful green campuses in surrounding.

6.8 Environmental Stewardship Awards

The university shall announce Environmental Stewardship awards from time to time to recognize laudable performances of different departments and communities of the campus for their contribution and implementation of Waste Management and Eco Initiatives.

6.9 Sensitisation, Awareness and Capacity Building Programs

The university shall organize various workshops/seminars/dialogues/talks/creative actions/research programmes in order to sensitize the students, staff and community in surrounding about global and local environmental issues for moving towards a resilient future.

6.10 Policy Monitoring and Review

The advisory board shall monitor and review the efficacy of the policy on annual basis. Discreet or micro data could be made accessible to faculty and departmental heads for taking appropriate actions and complying with them on regular basis.

