E-WASTE MANAGEMENT POLICY

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Approved under 12(b) and 12(f) of UGC Act, 1956
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TABLE OF CONTENTS

1. INTRODUCTION

Waste is an outcome of product or a substance that is no longer suited for its intended use. Electronic waste also known as E-Waste or WEEE (Waste electrical and electronic equipment) comprises of a broad and growing range of electronic devices, ranging from large household devices such as refrigerators, electric motors, voltage stabilizers, air conditioners, cell phones, personal stereos, Television, LED's, CRT's, Computer systems and other consumer electronics which have outlived their lives and have been discarded by the users.

Robinson 2009 defines E-Waste as "any device connected to a power source that no longer satisfies the current owner to the purpose for which it was created", such as computer, television, cellphones, refrigerator and ovens. With the presence of deadly chemicals and toxic substances in the electronic gadgets, disposal of E-Waste is becoming an environmental and health nightmare. Globally only 15 – 20 percent of E-Waste is recycled while the rest is dumped into developing countries such as India, China and Nigeria.

Table 1: Composition of E-waste

S.No.	Material	Element	Percentage
1.	Ferrous metals	Iron and Steel	36
2.	Non-ferrous metals	Aluminium,Copper,Lead,Cadmium, Mercury,Gold,Silver, Palladium,Indium, Arsenic, Selenium	19
3.	Plastics	Brominated and Non brominated Plastic	23
4.	Glass	Lead glass and normal glass	15
5.	Other	-	7

Source: ***http://ewasteguide.info/e-waste-composition***

The demand for electronic and electrical equipment (EEE) has been on the increase in the last decade as a result of accelerated economic growth, coupled with urbanization around the world. The useful life of electrical and electronic equipment (EEE) has been shortened as a consequence of the advancement in technology and change in consumer patterns. This has resulted in the generation of large quantities of electronic waste (e-waste) that needs to be managed. The handling of e-waste including combustion in incinerators, disposing in landfill or exporting overseas is no longer permitted without isolating the hazardous materials due to environmental pollution and global legislations.

Islamic University of Science and Technology, Awantipora makes use of a wide range of electronic and electrical equipment's owing to the different center's in department resulting in the generation of huge amount of e-waste. The University has a separate school for Engineering and Technology with Computer Science Engineering as one of its branches in addition to

department of Computer Science within the same school. Both the departments have well established Computer laboratories with hundreds of Computer Systems and allied peripherals. Most of the other departments also support their own computer labs . Moreover, entire university faculty and staff in administration, technical and finance use computers for carrying out their day-to-day functioning. The obsolescence rate of the IECT Equipment is 3-5 years and therefore has to be discarded and replaced by new devices. Thus there is prime need of a E-waste management in the University, which would ensure the disposal of these obsolete IECT equipment's , as per the approved norms set by the regulatory bodies in the country.

Establishment of e-waste management infrastructure, awareness and education, and human resource development resource mobilization are some of the key strategies encompassed by this policy document.

2. POLICY STATEMENT

The University will adopt the principles of the 'best practicable environmental option' in the delivery of its waste management services. The University will apply a 'waste hierarchical approach', to reduce, reuse, recycle and recover waste products in preference to the disposal of waste to landfill. The University recognizes the importance of meeting these legal requirements and to manage its waste responsibly, reduce the volume of waste sent to landfill and to sensitize reuse and recycling where ever possible. The University requires all the teaching and non-teaching staff, students, guests and anyone else making use of the premises to comply with this Policy and associated "University Environmental Guidance" to ensure compliance with all waste legislations. Any E-waste generated in the campus shall be managed and handled in accordance with the compliance criteria and the procedure laid down in E-waste (Management & Handling) Rules under the Environment Protection Act 2016 and E- Waste (Management) Amendment Rules, 2018.There is a legal requirement for all who produce, keep or dispose hazardous/radioactive waste/chemical waste of any type to comply with the various regulations under national and international environmental protection legislation.

3. OBJECTIVES OF THE POLICY

In developing this e-waste policy, IUST seeks to meet the following objectives:

i. To minimize generation of e-waste at source and facilitate repair, reuse and recycling where ever possible, over the disposal of wastes in a cost effective manner.
ii. To mobilize and sensitize stakeholders on the proper management and handling of e-waste on a sustainable basis.
iii. To ensure the safe handling and storage of wastes in University campus.

iv. To encourage use of environmentally sound e-waste recycling methods.
v. To provide guidance on the standards of electronic equipment that is implemented in the University.
vi. To provide appropriate training for teacher, resident, staff, students and other stakeholders on waste management issues

4. SCOPE OF THE POLICY

This Policy is formed to be applicable in the University campus and covers all electronic equipment and devices and e-waste management operations on e-waste resulting from activities of staff and students within the University.

5. E-WASTE POLICY GUIDELINES

I. Considering the negative impacts of the improper disposal of e-waste and need to implement an effective e-waste management system in the University. There are only two e-waste disposal methods at hand with the University, namely: i) store at the warehouse and ii) hand over to e-waste collectors as identified by the Govt..

The following recommendations are offered regarding the above suggestion: a) the University should sponsor seminars regarding proper e-waste management and disposal for students, faculty and staff; b) Teachers are encouraged to inculcate positive values to their students in terms of caring for the environment through proper e-waste disposal; c) the University administration may also consider the implementation of the proposed e-waste inventory management system so as to further improve the current practices in the University, making it more responsive to the challenges of today.

II. Islamic University of Science and technology endeavors to ensure environmentally sound management of e-waste. Environmentally sound recycling refers to recycling without leading to adverse impact on environment and health. The use of environmentally sound technologies needs to be encouraged in order to increase efficiency in processes, sensitize recovery materials and conserve energy, thus reducing waste generation. The policy shall enable access to such technologies and make the informal stakeholders accountable.

Environmentally sound e-waste management shall be achieved through the following measures:

1) E-waste sound recycling in authorized/centralised areas.
2) Ensure use of environmentally sound technologies to maximize recovery and minimize waste generation.
3) Appropriate technologies for recycling to be sourced/developed
4) Training and skills development to be encouraged for using environmentally safe

operations in handlinge-waste.

5) The need to dispose e-waste in manner that is safe and sound with respect to its staff, students, and Institutional operations.
6) The need to establish clear guidelines on e-waste management.

6. E-Waste Policy Implementation Plan

6.1. Apex level Advisory Committee

The university shall have an E-waste apex level advisory committee to implement above mentioned policy under the chairmanship of Vice Chancellor or Chairman, nominated by the Vice Chancellor.

The e-waste apex level advisory committee shall be comprising of faculty, staff and students that shall:

1) Oversee implementation of this policy.
2) Develop procedures and work instructions for maintaining record of e-waste, along with collection, sorting, dis-assembly, packaging, storage and disposal of e-waste.
3) Minimize the unintended consequences due to e-waste handling.
4) Encourage decisions consistent with the national policies.
5) Provide flexibility to adopt the changes required from time to time.
6) Review inputs from all stakeholders.
7) Monitor the implementation of this policy and advise university management as appropriate.
8) Advise review/improvement of this policy from time to time.
9) Advise on formulation of Donation Policy under CSR initiative.

6.2. E-Waste Management forum of students

The University shall constitute an e-waste management forum of students which shall organize:

1) Quarterly awareness forums for sensitization of students on e-waste.
2) Quarterly voluntary surrender e-waste to the university.

The forum activities shall be coordinated by Director, CIED.

6.3. E-Waste disposal committee

The University shall constitute an e-waste disposal committee which shall be responsible for:.

1) Ensure that e-waste is collected every quarter and kept in an appropriate storage pending the recommendations/approval of recommendations of the Disposal Committee.

2) Profile all e-waste generated at least once every quarter and prepare including recommendations for disposal.
3) Execute the recommendations of the Disposal Committee and prepare a yearly report for the UniversityManagement.

The Committee shall be constituted as following:

- Director IT&SS Chairman
- HoD, ECE Member
- HoD CSE Member
- Representative of Finance Department
- Representative of Administration
- Any other member(s) to be nominated by CA

Other members to be nominated by CA.

6.4. Minimizing waste generation at source

Waste Minimization has to be attempted first considering the waste management hierarchy plan. It will be mandatory on the part of the Head of the department to report changes/additions in hazardous waste generation and steps taken to reduce generation of waste per unit of production. As per the Hazardous Waste regulations, University can store hazardous waste for a period not exceeding 90 days and shall maintain a record of sale, transfer, storage, recycling and reprocessing of such wastes unless the concerned State Pollution Control Board has extended the stipulated period. The waste could either be recycled /reused or disposed of in captive or common treatment, storage and disposed facilities available in the campus or incinerated, as proposed in the waste hierarchy list (Reduce-Reuse-Recycle-Energy recovery-Proper Disposal).

6.5. Reuse, recovery and recycling of non-hazardous waste

University will explore options/ opportunities of reusing, recovery and recycling of nonhazardous waste in an environmentally sustainable manner. Paper waste will be recycled to make packing material. The toxic inks and dyes of the paper will be treated with enzyme technology, which is environmentally benign.

6.6. Setting up of disposal facility

For the waste which cannot be recycled/ reused, safe and environmentally sound disposal will be adopted depending upon waste category. The University can have its own landfill

for proper disposal and land for that Landfill can be demarcated near the foot of Wasturwan hill in the second campus of the University. Design and operation norms of disposal facilities should be strictly adhered to as per the guidelines framed by CPCB.

1. All University electronic and electrical devices which have become obsolete shall be reported to e-waste disposal committee as constituted by the committee. E-Waste disposal committee team shall pick up e-waste items from all Departments or sections. They shall categories items for recycling purpose or donation purpose depending upon the status of the equipment. Items which have become obsolete and are of no use can be treated as scrap and can be handed over to govt, approved e-waste recyclers to generate some amount of revenue for the University.

2.The e-waste disposal team shall be responsible for record keeping and certification of disposal for all e-waste as per the recommendations.

7. Review Policy

The policy shall be reviewed after every five years or earlier, as need arises to check the Effectiveness of the Proposed E-Waste policy Management System in the University.