



CENTRAL UNIVERSITY OF KARNATAKA

ಕರ್ನಾಟಕ ಕೇಂದ್ರೀಯ ವಿಶ್ವವಿದ್ಯಾಲಯ ಕರ್ನಾಟಕ ಕೇಂದ್ರೀಯ ವಿಶ್ವವಿದ್ಯಾಲಯ

Central University of Karnataka

(Established by an Act of the Parliament in 2009)

Aland Road, Kadaganchi, Kalaburgi-585 367, Karnataka

7.1.3: Describe the facilities in the Institution for the management of the following types of degradable and non-degradable waste (within 500 words)

- Solid waste management
- Liquid waste management
- Biomedical waste management
- e-Waste management
- Waste recycling system
- Hazardous chemicals and radioactive waste management

The Central University of Karnataka (CUK) is committed to sustainable waste management practices, emphasizing the reduction, reuse, and recycling of both degradable and non-degradable waste. Recognizing the importance of maintaining a clean environment, the university advises stakeholders to adopt eco-friendly practices. Various initiatives have been undertaken to ensure a green campus:

1. **Solid Waste Management:** CUK actively discourages the use of plastics on campus, promoting the adoption of paper and cloth bags by students and staff. Dedicated bins are strategically placed across the campus to facilitate the separate disposal of degradable and non-degradable waste. Specifically, bins are provided in kitchen and dining areas to manage kitchen and food waste. Trained personnel collect and transport waste to disposal pits provided by the Kalaburagi Municipality, where degradable waste is composted and utilized as manure for campus greenery.
2. **Liquid Waste Management:** The university employs an integrated drainage system to collect sewage from various facilities, including hostels, staff quarters, and academic blocks, directing it to two sewage treatment plants (STPs) with a capacity of 200 KLD each, established in 2015. An external agency is contracted for the annual maintenance of these STPs, ensuring efficient operation. Treated sewage water, tested for contaminants like E. coli, is reused for gardening purposes.
3. **E-Waste Management:** Regular audits are conducted to identify obsolete electronic equipment across departments. A dedicated committee oversees the examination and categorization of e-waste, determining items for repair, reuse, or disposal. All collected

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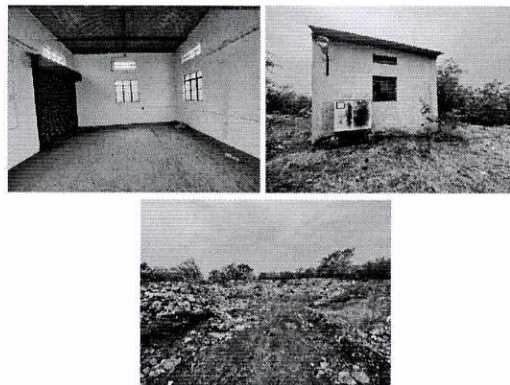
e-waste is stored centrally for proper processing and disposal in accordance with regulations.

4. **Biomedical Waste Management:** An MoU with Brundhavan Foundation facilitates the collection and safe disposal of biomedical waste generated on campus, ensuring compliance with environmental regulations. Separate bins are maintained for domestic waste, and the Life Science department follows a color-coded system for waste disposal. Microbiological and biotechnological waste is autoclaved and disposed of appropriately.
5. **Waste Recycling System:** CUK emphasizes waste recycling for resource management and environmental preservation. Bins are provided for the disposal of biodegradable, dry, and domestic waste. Damaged furniture is collected and assessed for repair or disposal through auction, with repairable items refurbished and reused.
6. **Hazardous Chemicals and Radioactive Waste Management:** Hazardous chemicals and solvents generated in laboratories are collected and disposed of safely. Sewage water is tested for hazardous chemicals and treated accordingly. While radioactive materials have not yet been used, safety measures such as fuming cupboards are in place to mitigate exposure to toxic fumes during experiments.

Through these comprehensive waste management initiatives, CUK demonstrates its commitment to environmental sustainability and the creation of a cleaner, healthier campus environment for all stakeholders.

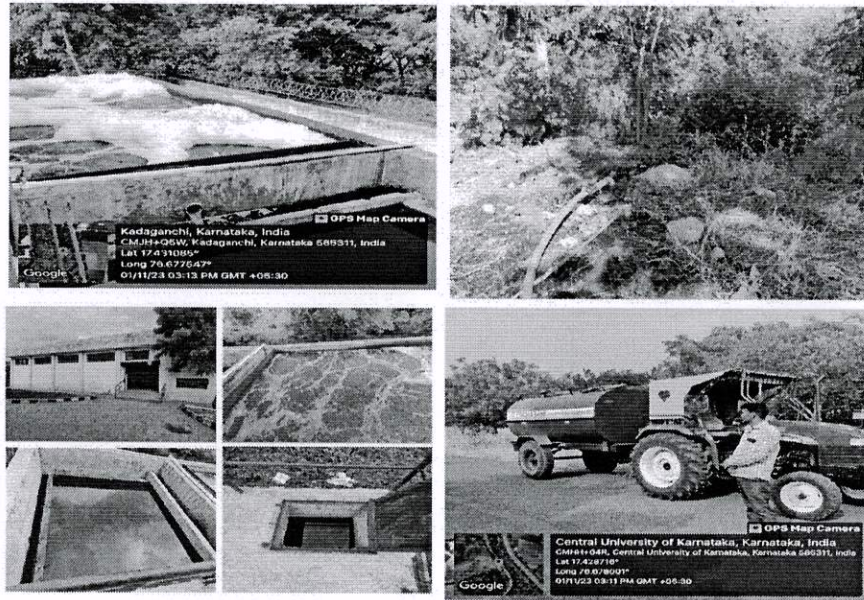
Evidence:

1. Solid Waste Management:

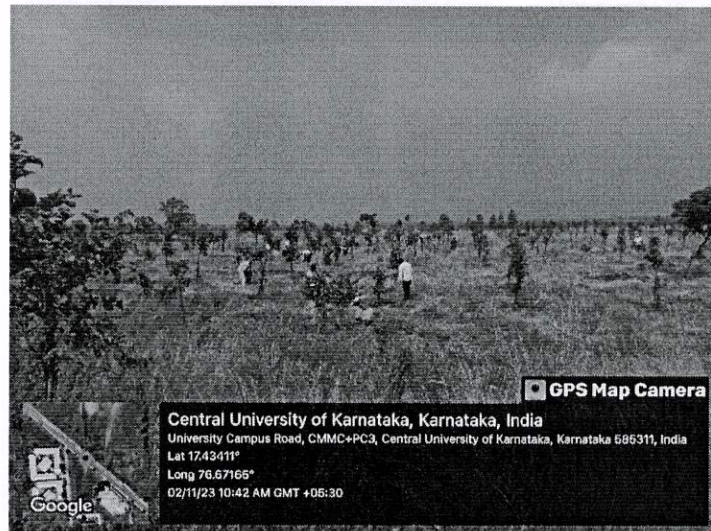
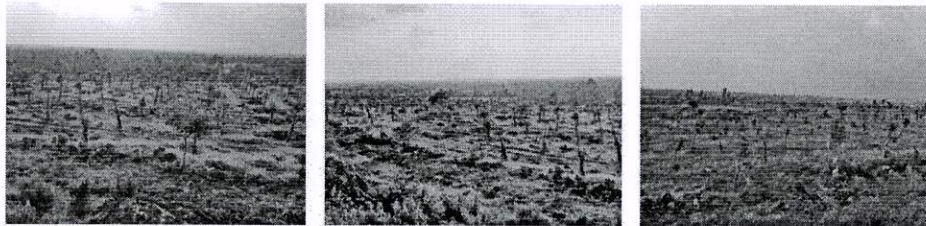


Solid Waste Management Dumping yard

2. Liquid Waste Management:



Waste water treatment and recycling unit



Treated water from STP used for Trees


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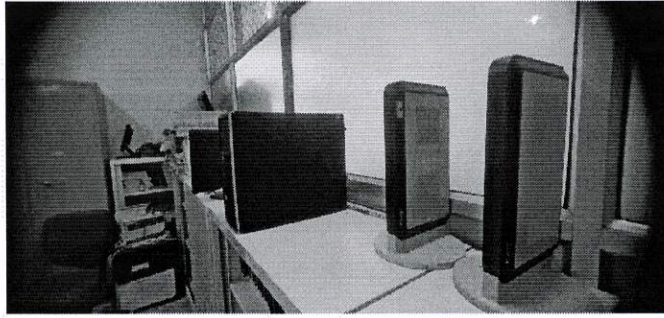
3. E-Waste Management:



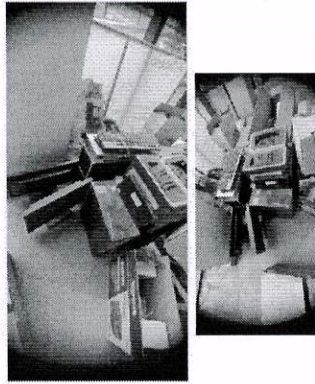
Non-working CPUs and cartridges has been stored in the E-waste yard



Non-working CPU bodies, CPUs and cartridges has been stored in the E-waste yard.

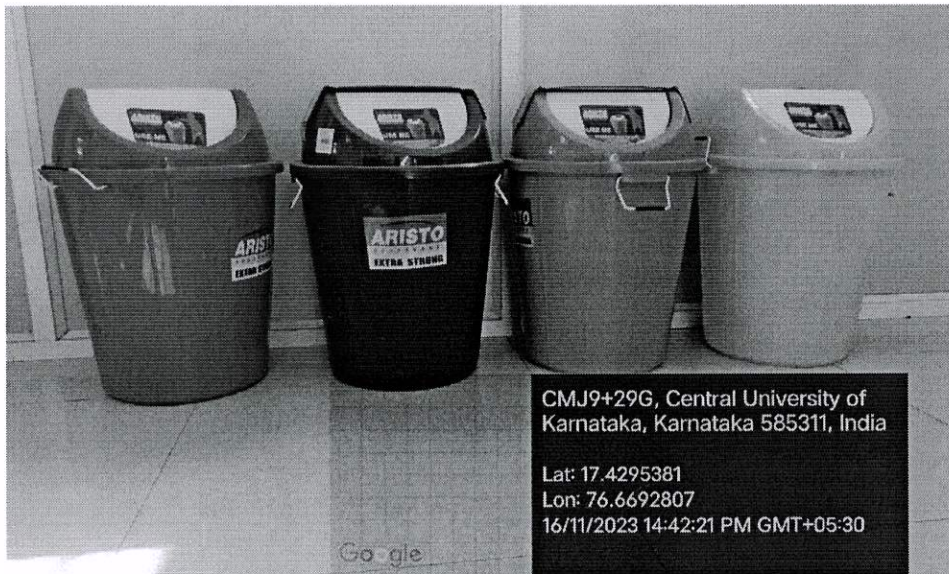


Used and irreparable servers and modems deposited in the E-waste yard.



Used and irreparable printers deposited in the E-waste yard.

4. Biomedical Waste Management




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Red- Syringes, gloves, Catheters, **Blue-** Glass, plastics, **Green-** Biohazardous materials, contaminated with biological fluids, **Yellow-** Cotton, swabs, blood bags, collection tubes etc.



Containers for medical waste disposal in Health Centre, CUK.

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MOU between CUK and Brundhavana Foundation:

Ref No: KAR/KLB/BF/BD/2020-21/266
E-Stamp Certificate Number: IN-KA73184248236579T

Date: 11.03.2021

To,
**CENTRAL UNIVERSITY OF KARNATAKA
KADAGANCHI, KALABURGI.**

Sub: Received MOU copy of CENTRAL UNIVERSITY OF KARNATAKA
KADAGANCHI.

"GREETINGS FROM BRUNDHAVANA FOUNDATION"

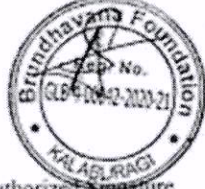
Respected Sir/Madam,

Brundhavana Foundation is authorized by Karnataka State Pollution Control Board, Government of Karnataka for implementing and operating of common Bio medical waste treatment facility as per Bio Medical Waste Management Rules, 2016. The Facility caters to Common Bio Medical waste collection, transportation, segregation and Scientific Disposable of Bio Medical waste which is generated from Health Care Establishments (HCEs) of entire Kalaburagi revenue District.

With reference to the above subject this is to inform you that, the original copy of MOU for Fresh/Renewal of HCE with 4 numbers of beds represented by **Medical Officer** from **CENTRAL UNIVERSITY OF KARNATAKA KADAGANCHI, KALABURGI.** is received in office on 11/03/2021 by authority of the establishment for further procedures.

Thanking you,

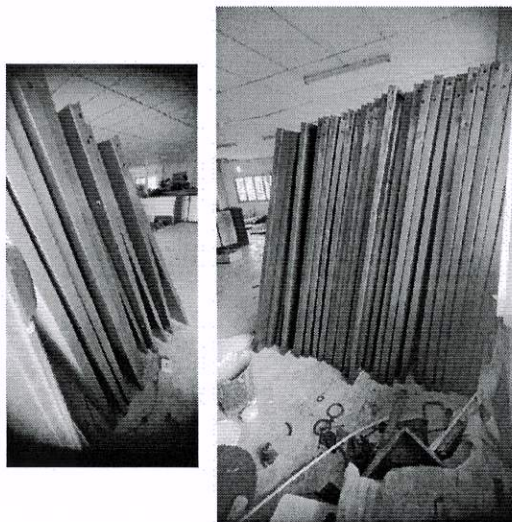
For, M/s Brundhavana Foundation



Authorized Signature

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5. Waste Recycling System:



Rusted and broken cot has been repaired and reused for hostels.

6. Hazardous Chemicals and Radioactive Waste Management:



Recovered chlorinated solvent and Chlorinated waste

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For, M/s Brundhavana Foundation



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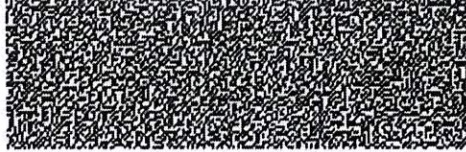
सत्यमेव जयते

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Government of Karnataka

e-Stamp

Certificate No. : IN-KA73184248236579T
Certificate Issued Date : 11-Mar-2021 12:45 PM
Account Reference : NONACC (FI)/ kaksfci08/ GULBARGA5/ KA-GU
Unique Doc. Reference : SUBIN-KAKAKSFCL0821696615985395T
Purchased by : CENTRAL UNIVERSITY OF KARNATAKA KADAGANCHI
Description of Document : Article 12 Bond
Description : AGREEMENT
Consideration Price (Rs.) : 0
(Zero)
First Party : CENTRAL UNIVERSITY OF KARNATAKA KADAGANCHI
Second Party : BRUNDHAVANA FOUNDATION
Stamp Duty Paid By : CENTRAL UNIVERSITY OF KARNATAKA KADAGANCHI
Stamp Duty Amount(Rs.) : 100
(One Hundred only)



Authorised Signature
For : Vidyavathi Mahila Souharda
Shakari Niyamita, Kalaburagi

Please write or type below this line


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Statutory Alert:

1. The authenticity of this Stamp certificate should be verified at 'www.stamptstamp.com' or using e-Stamp Mobile App of Stock Holding. Any discrepancy in the details on this Certificate and as available on the website / Mobile App renders it invalid.
2. The onus of checking the legitimacy is on the users of the certificate.
3. In case of any discrepancy, please inform the Government Authorities.

IN-KA73184248236579T - NONACC (FI)/ kaksfci08/ GULBARGA5/ KA-GU - SUBIN-KAKAKSFCL0821696615985395T - CENTRAL UNIVERSITY OF KARNATAKA KADAGANCHI - BRUNDHAVANA FOUNDATION - CENTRAL UNIVERSITY OF KARNATAKA KADAGANCHI - 100 - (One Hundred only)

MEMORANDUM OF UNDERSTANDING

WHEREAS the M/S BRUNDHAVANA FOUNDATION KALABURAGI, with trust registration No: GLB-4-00042-2020-21, a registered Society under the Registration of Societies Act 1860 (Hereinafter referred to as the Foundation) is desirous of carrying out programs in the areas of urban waste and Hospital waste management and have set up a Common Healthcare Urban Waste And Bio-Medical Waste Management Solution (CHUBS) which has been authorized by Karnataka State Pollution Control Board, Government of Karnataka.

AND WHERE AS, CENTRAL UNIVERSITY OF KARNATAKA KADAGANCHI, KALABURGI, is individual Health Care Establishment (Hereinafter referred to as HCE's) acting through MEDICAL OFFICER, with 4 numbers of beds has agreed to avail the services of the Common Healthcare Urban Waste and Bio-Medical Waste Management Solution (CHUBS) set up by the above said Foundation.

AND WHEREAS the Foundation would be making necessary arrangement to manage the plant, machineries and dispose the Waste as envisaged under the relevant rules for handling and management of Bio Medical Waste generated by the hospitals in general.

Both the parties agree to work together in the field of Hospital Waste Management as under:

TERMS OF REFERENCE:

Responsibilities of the Occupier of Healthcare Establishment (HCE)

1. To obtain authorization from the Karnataka State Pollution Control Board (KSPCB) with service afforded actual number of beds in their HCE's.
2. To segregate waste at the point of generation in accordance with Schedule I & II of the Bio-Medical Waste Management Rules, 2016 and designated color coded bags; bar coded which are to be procured from M/s Brundhavana Foundation only. On site segregation and storage should be according to standards prescribed.
3. To establish secured waste collection site for storage within the HCE's before handing over to the waste collector of CHUBS. Large bins or trolleys from storage area to the transport vehicle would have to be arranged by the HCE's. The waste storage room should be easily accessible for lifting the waste.

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4. To ensure that the waste is handled without causing health hazards to human health and the Environment
5. To furnish annual reports regarding generation, collection, storage, transportation and disposal of Bio-Medical Wastes in the prescribed format to the prescribed authority.
6. To designate a Nodal Officer responsible for interacting with CHUBS and KSPCB.
7. To disinfect sharp materials and mutilate them or at least hand them over in a puncture proof and secure container for mutilation and sterilization at the site. Puncture proof equipment's to be purchased from CHUBS only.
8. To use appropriate bags and bins for segregation, collection and storage of Bio-Medical Waste using prescribed color codes, along with barcodes before handing over to the CHUBS representatives for treatment. These bags would have to be provided by the CHUBS only at the cost of HCE's.
9. Regular payment of service charges will be the responsibility of the HCE's. The HCE's would have to make the arrangements for the payment of the service charges along with the applicable taxes to the authorized person of the CHUBS.
10. On time payment of service charges will be the responsibility of the HCE's. The HCE's will have to make the arrangements for the payments of the service charge to the authorized Person of CHUBS in the form of DD only drawn in Favor of M/s BRUNDHAVANA FOUNDATION, KALABURAGI -02.

Services to be provided by the CHUBS:

1. To schedule the collection timings and mode in consultation with the HCE's but within a reasonable range of time.
2. The CHUBS representatives would arrange to collect the segregated Bio-Medical Waste from specific locations meant for storage of Bio-Medical Waste of each of the HCE's with whom this MOU is being signed.
3. The CHUBS will be responsible for the safe transport of the Bio Medical Waste from the HCE's to the common facility in accordance with the Bio Medical Waste Management (Bio Medical Waste Management) Rules, 2016.
4. Appropriate treatment and disposal of different categories of waste would be carried out by CHUBS in accordance with the Bio Medical Waste Management Rules, 2016 and time to time amendments.

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5. Monitoring and ensuring complete disinfection/sterilization of the wastes in accordance with the Bio Medical Waste Management Rules will be carried out in collaboration with the **Karnataka State Pollution Control Board (KSPCB)** at Kalaburagi.
6. A liquid effluent treatment plant to treat the liquid wastes emanating from the HCE Could be established and operated in accordance with the Environment Protection Act (EPA) 1986. Brundhavana foundation would help in designing and constructing of the ETP suitable for the HCE at the sole cost of HCE only.
7. The collected waste material would be checked periodically for segregation, labeling etc., and suggestions would be given for improvement to the HCE's, which the HCE's must implement.
8. Appropriate timely training will be provided by the CHUBS to the HCE personnel for segregation, transport to the facility vehicle, storage etc. as and when sought by the HCE administration. The HCE shall cooperate and accommodate the suggestions given during training and incorporate them in their practices in the spirit of co-operation and goodwill and to comply with Bio Medical Waste Management Rules 2016.
9. Waste audit and quantification will be carried out at the individual HCEs by CHUBS from time to time, which will be submitted to the Hospital Administrator/Medical Superintendent of the HCEs with a Copy to the Karnataka State Pollution Control Board. The HCE should co-operate and facilitate the same as in enumerating the beds.
10. Consent for operation and authorization by Karnataka State Pollution Control Board for the facility will be obtained by the CHUBS and regularly renewed.
11. Certificate for the proper transport vehicle will be procured by the CHUBS.
12. The CHUBS will collect the Bio Medical Waste from the HCE's having valid authorization of Karnataka State Pollution Control Board.

JOINT PROCEDURE ORDER:

CHUBS will collect, transport, store, treat and dispose the different wastes in accordance with the Bio-Medical Waste Management Rules 2016 and will avoid becoming liable for improper treatment or disposal. The HCE's giving their wastes to the CHUBS if willing to check then need to take prior written approval and then will have the right to enter and inspect the site to ensure the above

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Emergency Contingency Plan:

In case of failure by CHUBS authorized person to collect waste for more than 48 hours from the designated time of collection from the HCE, representative of CHUBS and the KSPCB will be informed by the HCE. CHUBS will collect the waste from the HCEs 6 days in the week (excluding Sundays).

Collection of waste may not be undertaken on major holidays declared by Government. CHUBS will intimate the HCEs about the non collection days every quarter. CHUBS will not undertake collection of waste in the case of strike, lockout, closer or riots in the city and any other such conditions beyond its control.

In case there is disruption of services either in the collection, transportation, storage such as breakdown at the treatment and disposal site, alternative temporary arrangements will be made for disposal of the waste.

This MOU is made to obtain authorization from Karnataka State Pollution Control Board and the Bio Medical Waste will be collected from HCE's only upon submission of the valid authorization.

Mode of Payment:

A payment of **Rs.6.00 per bed per day** will be paid in advance by the bedded HCEs every quarter. The payment will be collected every quarter and will have to be given by the HCE's to the authorized person from CHUBS in the first week of the month of that quarter for which the waste collection is going on. HCE's will have to make arrangements for the timely payment of the service charge which includes transportation cost along with the applicable taxes to the authorized person of CHUBS only in the form of DD drawn in Favor of **M/S Brundhavana foundation, KALABURAGI**.

In case of constant delay in payment or non-payment by the HCE for more than 15 days of the deadline stipulated in the above Para, the CHUBS will stop the Collection of Bio Medical Waste and MOU will be cancelled and the HCE name will be informed to the Karnataka State Pollution Control Board to take further action against the HCE under Bio Medical Waste Management Rules, 2016.

The above said rate is applicable to the HCEs till next rate revision. After rate revision, New rates will be applicable to all Government and private bedded, non-bedded HCEs of entire Kalaburagi.


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Validity of the MoU:

This MOU is valid for One year or till next rate revision whichever is earlier.

Dispute resolution:

In case of any dispute between or among the parties hereto regarding any of the clauses of this MoU, the matter shall be referred to arbitration of such person(s) as CHUBS may decide and the same shall be decided in accordance with the provisions of the Indian Arbitration Act in force.

This agreement is subject to the jurisdiction of Courts in Kalaburagi.

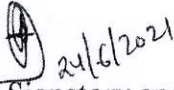
In case of transgression or any other reason of akin nature whatsoever, the parties shall discuss the same among themselves in the spirit in which this MoU is signed rather than attempting to revoke the penal provisions.

Enforcement of this agreement will be from Dated: 14-10-2020 onwards

Place: Kalaburagi.

Date: 11/03/2021

For and On Behalf of
CENTRAL UNIVERSITY OF
KARNATAKA KADAGANCHI.


Authorized Signatory and Seal
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Central University of Karnataka
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BRUNDHAVANA FOUNDATION

Authorized By KSPCB,
Government of Karnataka



Registration Certificate

Certificate No :	BFK/BD/266/2020-2021	
Name of the Establishment :	CENTRAL UNIVERSITY OF KARNATAKA KADAGANCHI.	
Name of the Establisher :	MEDICAL OFFICER	
Address of the establishment :	CENTRAL UNIVERSITY OF KARNATAKA KADAGANCHI, KALABURGI.	
Type of Establishment :	HCE	No of beds: 4
Certificate Validity :	From : 14.10.2020	To: 13.10.2021



For: Brundhavana Foundation



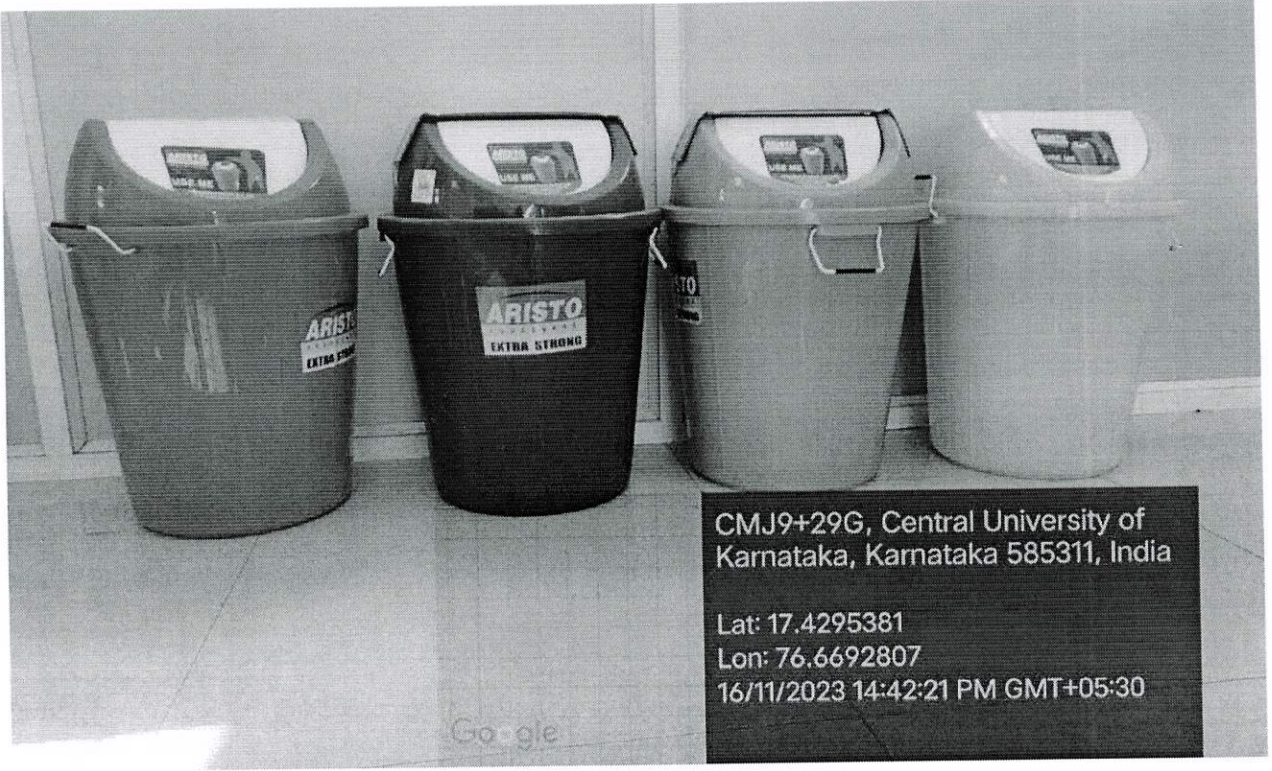
Authorized Signature

Renewal Details

Sl. no	Types of Establishment	Number of Beds	Renewal Year	Date	Authorized Signature
1					
2					
3					
4					
5					

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Red- Syringes, gloves, Catheters, **Blue-** Glass, plastics, **Green-** Biohazardous materials, contaminated with biological fluids, **Yellow-** Cotton, swabs, blood bags, collection tubes etc.


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Tree Plantation



B. S. S.
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