



**SRI VENKATESWARA COLLEGE  
(UNIVERSITY OF DELHI)**

**EVENT REPORT**

<b>NAME OF THE EVENT:</b> Economic Assessment of E-Waste			
<b>DATE</b>	<b>DEPARTMENT</b>	<b>COMMITTEE/SOCIETY</b>	<b>COORDINATORS' NAME</b>
19.06.23 – 30.06.23	History		Dr. Sunitaa Saikia
<b>TIME</b>	<b>VENUE</b>	<b>NUMBER OF PARTICIPANTS</b>	<b>NATURE: Outdoor/Indoor; online/offline/hybrid</b>
As per convenience	Various	33	Outdoor, Indoor, Offline
<b>FINANCIAL SUPPORT/ ASSISTANCE (if any):</b>	Self-Funded		

**BRIEF INFORMATION ABOUT THE ACTIVITY**

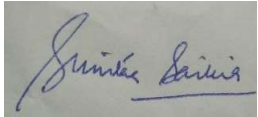
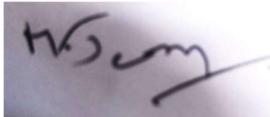
<b>TOPIC/SUBJECT OF THE ACTIVITY</b>	Economic Assessment of E-Waste
<b>OBJECTIVES</b>	To educate students about how the rare earth metals in End-of-Life Electronic Devices can economically be lucrative while also enlightening them about the benefits of switching over to circular economy both for conservation of the environment as well as in job creation.
<b>METHODOLOGY</b>	<ol style="list-style-type: none"><li>1. Students were first asked to select an Electronic device/appliance of their choice (for example, a TV/Refrigerator/Laptop/Mobile Phone, etc).</li><li>2. They next enlisted the various precious metals in that particular device/appliance along with their weightage and derived their prices from the internet. The total price of precious metals from one device/appliance was calculated.</li><li>3. Then they looked into the total number of that specific appliance/device in their own building by inquiring door-to-door.</li><li>4. Though different models will contain different amounts and constituent elements in them, an average was decided upon. The students then did the economic assessment of all these End-of-Life devices/appliances in their respective buildings.</li></ol>
<b>INVITED SPEAKERS WITH AFFILIATION DETAILS (IF ANY)</b>	None
<b>OUTCOMES</b>	This activity was an eye-opener for the students as they realised how a device/appliance which one considers a waste, can be so rewarding

**if appropriately sent for recycling. Apart from giving economic returns, it will also help in conservation of resources as the rare earth metals which are used in these devices/appliances are brought into their purest form after a series of tedious extraction processes. If they are put back into the economy, it will cut down costs and energy. Students also learnt about various job creation opportunities at such formal disposal/recycling units.**

**PROOFS & DOCUMENTS ATTACHED (Tick mark the proofs attached):**

1 Notice & Letters	2 Number of Participants & Name of participants ✓	3 Video clip	4 Photos ✓	5 Feedback Form & analysis
6 News clip with details	7 Sample Copy of the Certificate ✓	8 Posters/ Invites	9 Event report Attested by Event Coordinator & IQAC Coordinator ✓	10 Any other document ✓

IQAC Document No: IQAC/SVC/2022-23/Hist/12	Criterion No: V & VII
Departmental file no: IQAC/SVC/2022-23/HIST	IQAC file No: 2022 – 23

NAME OF TEACHER & SIGNATURE	NAME OF HEAD/ COMMITTEE INCHARGE & SIGNATURE	IQAC COORDINATOR (SEAL & SIGNATURE)
 Dr. Sunitaa Saikia	 Mr. M Jeevan	

**For Reference:**

Criterion I	Curricular Aspects (planning & Implementation)	Criterion V	Student Support & Progression
Criterion II	Teaching Learning & Evaluation	Criterion VI	Governance
Criterion III	Research, Innovations & Extension	Criterion VII	Institutional Values & Best Practices
Criterion IV	Learning Resources and Infrastructure		

**Proofs Attached:**

*1. Participants' List*

**DEPARTMENT OF HISTORY**

**SEMESTER-II (2022-2023)**



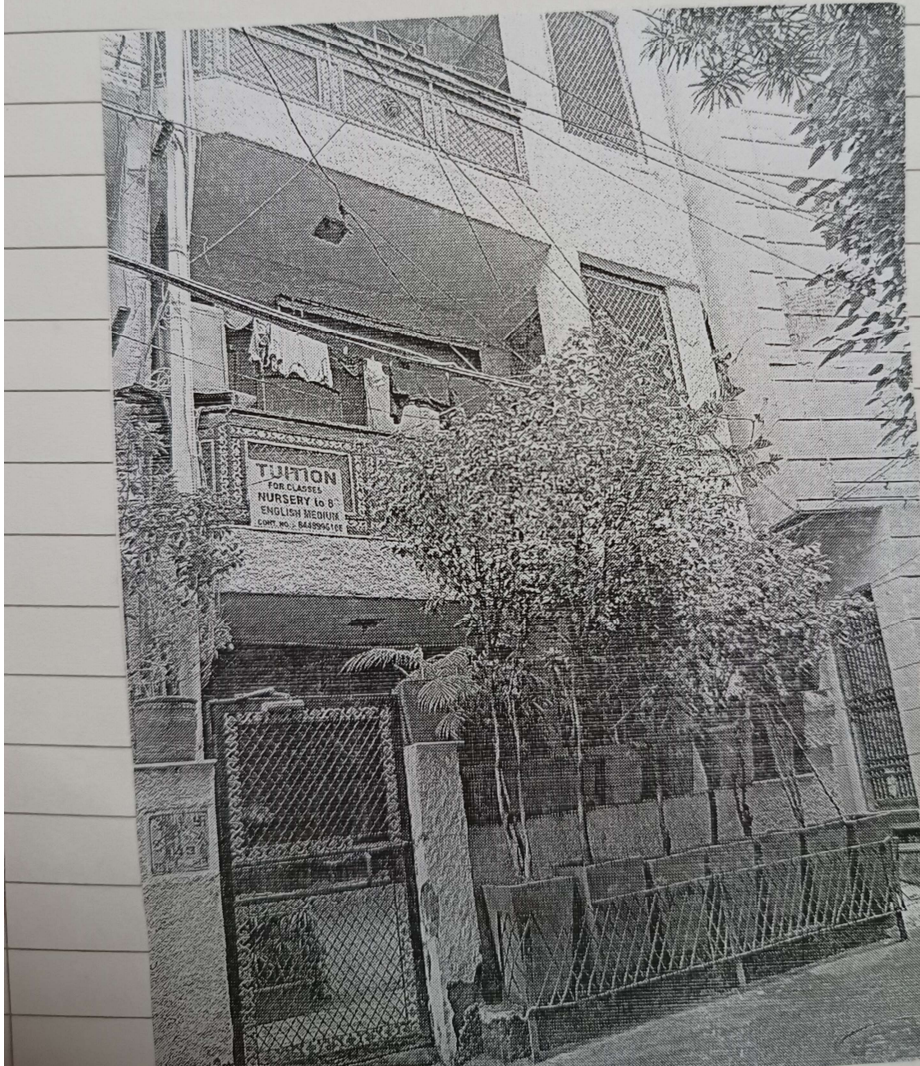
**Skill Enhancement Course: Prospecting E-Waste for Sustainability**

Sl. No.	Course	College Roll No.	Name of the Student
1	B.A. (Programme)	0122045	Sachin
2		60	Prachi Sharma
3		61	Sujeet Gupta
4		64	Ritesh Ranjan Chaurasiya
5		77	Anisha Poonia
6		84	Somya Godara
7	B.A. (Hons) English	0222005	Vani Bajaj
8		07	Saniya Saifi
9		11	Tejasvi Yadav
10		12	Anjali Choudhary
11		16	Aditya Kumar Singh
12		17	Ayush Pratap Singh
13		41	Shashi Jangir
14	B.A. (Hons) History	0622006	Sreethu VS
15		19	Pradeep Mehar
16		24	Shivam Kumar
17		34	Manish
18		49	Sheeza Jaswani
19		52	Yashasvi
20		56	Kautilya Ujjwal Joshi
21		57	Achanba Kongbam
22	B.A. (Hons) Pol. Sc.	0722004	Ujjwal Chauhan
23		37	Meeru
24		38	Ritik Baghel
25		56	Neeraj Choudhary
26	B.A. (Hons) Sociology	0822008	Abhay Kumar
27		21	Rohan Kumar
28		36	Adarsh Kumar Pandey
29		45	Prabhat Kumar
30	B.Com (Hons)	1022127	Akhtar Hussain
31	B.Sc. (Hons) Bio-Chem	1222022	Smita Maurya
32	B.Sc. (Hons) Botany	1422057	Ratendra Pratap Singh
33	B.Sc. (Hons) Maths	1722061	Pawan Panwar

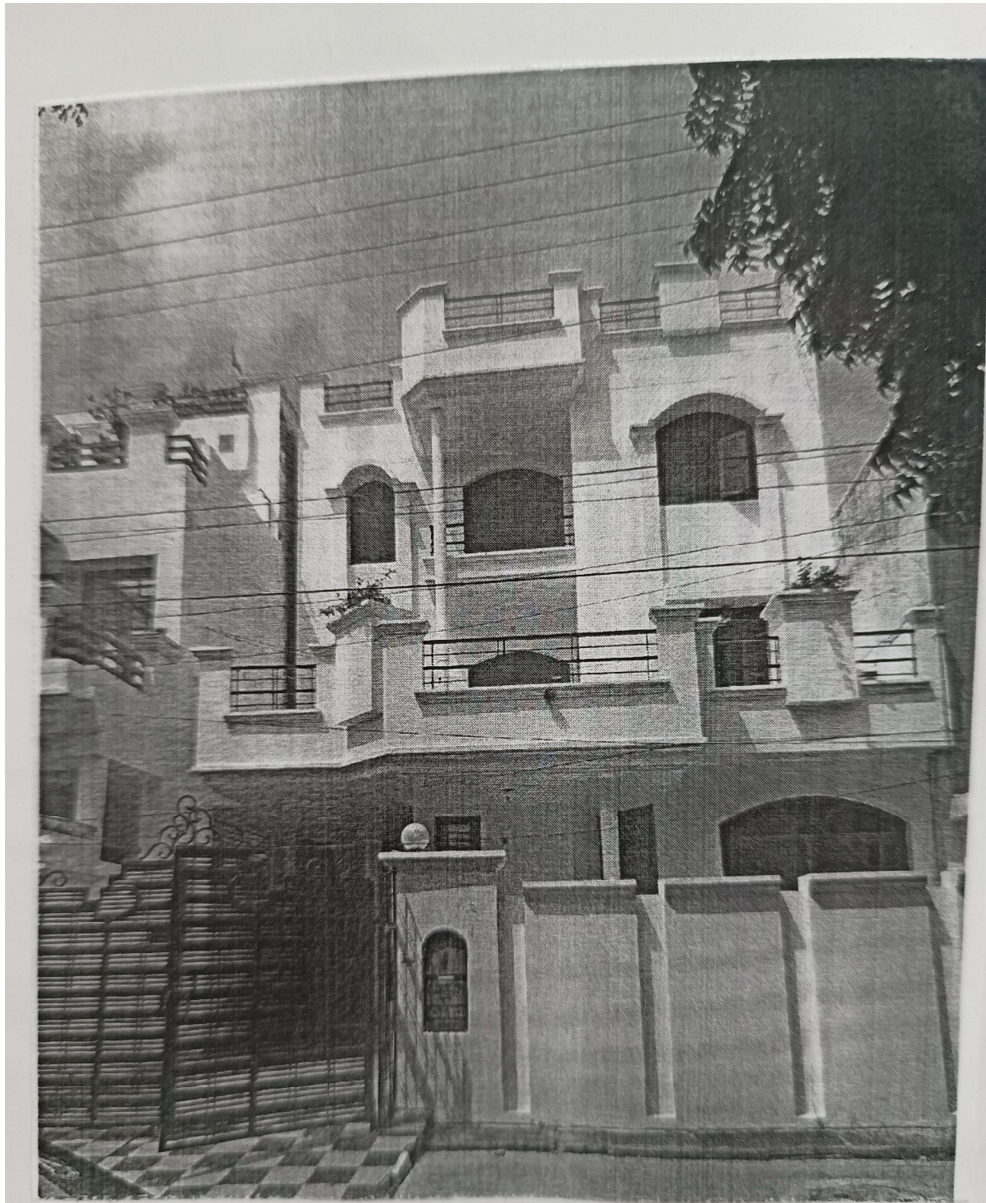
2. Photographs (Few buildings in which Economic Assessment was carried out):



Pg. no. 143  
Star Satya Niketan  
Near Shree Mandir.



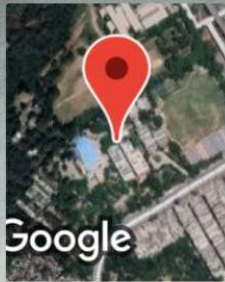
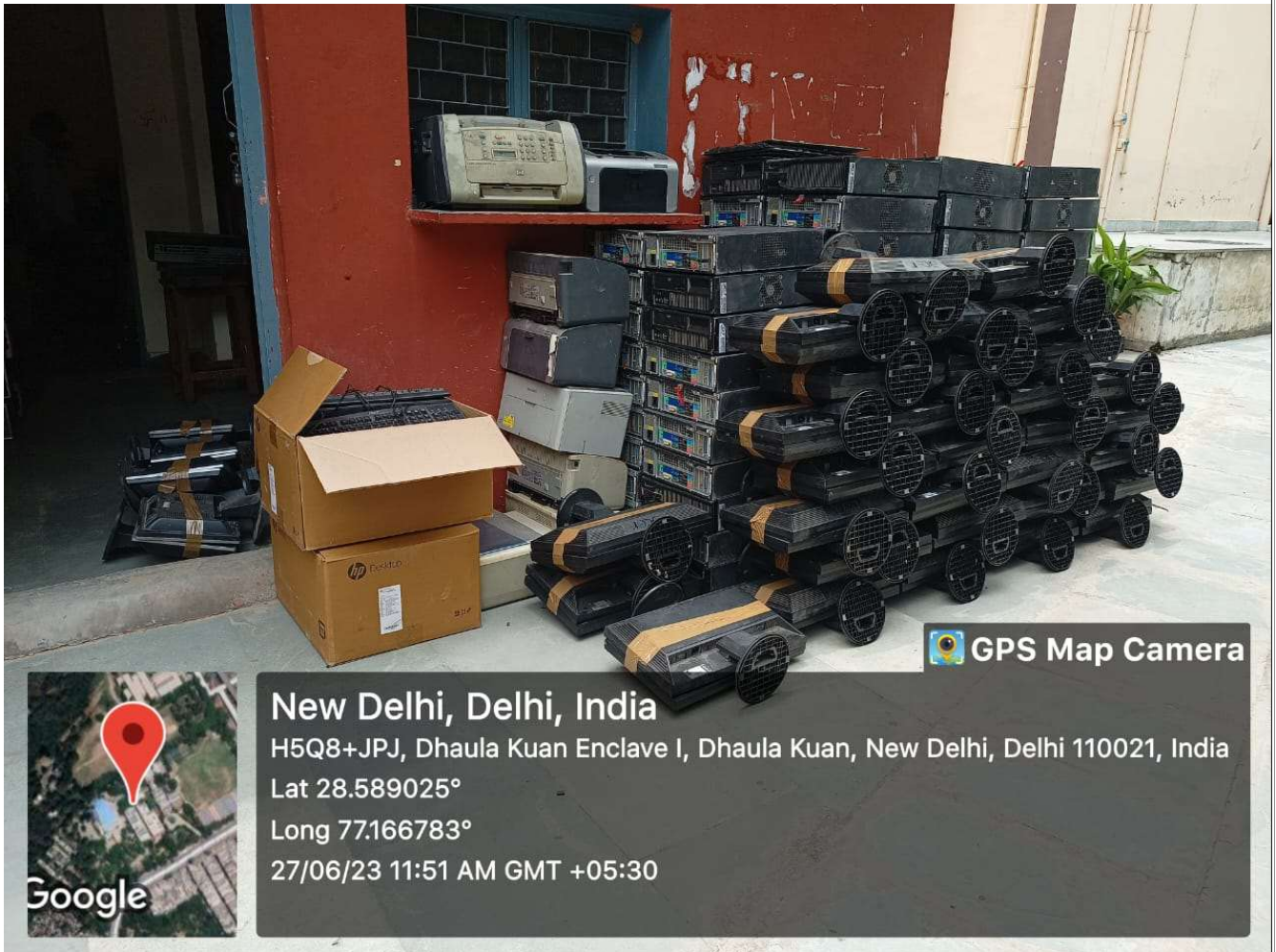




The Building In The Study







**GPS Map Camera**  
**New Delhi, Delhi, India**  
 H5Q8+JPJ, Dhaula Kuan Enclave I, Dhaula Kuan, New Delhi, Delhi 110021, India  
 Lat 28.589025°  
 Long 77.166783°  
 27/06/23 11:51 AM GMT +05:30

**Also educating students about how E-waste should be dealt with**

**3. Other Documents: Few pages from activity reports submitted by various students**

Page No. \_\_\_\_\_  
 Date \_\_\_\_\_

**INTRODUCTION**

E-Waste, Short for electronic waste, refers to discarded or obsolete electronic devices, equipment, and components. E-waste comprises a wide range of electronic products including computers, laptops, mobile phones, etc. These items contain various hazardous substances such as lead, mercury, cadmium and brominated flame retardants. Exposure to toxic substances during dismantling, recycling, and disposal processes can lead to respiratory issues, neurological disorders. Efficient e-waste management is essential to mitigate environmental hazards, conserve resources and protect human health.

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**Objective**

The Object of this project is to develop an efficient and sustainable e-waste management system specially focusing on mobile phones. The project aims to raise awareness about environmental and health hazards associated with improper disposal of mobile phones and to provide practical solutions for their recycling and reuse. By implementing this project, we seek to minimize the negative impact of e-waste on environment, conserve valuable resources, and promote a circular economy.

# AIM

The main aim of this project is to understand the economic assessment

Recycling mobile phone e-waste, including other tech, can have both economic and environmental benefits. Here is an economic assessment of recycling mobile phones.

**Resource Recovery:** Mobile phones contain valuable materials like precious metals (Gold, Silver, Palladium) and rare earth metals that can be recovered through recycling.

**Cost Savings:** Recycling e-waste reduces the demand for raw materials and lowers manufacturing costs. This can lead to cost savings for both the manufacturers and consumers of recycled materials.

**Job Creation:** E-waste recycling facilities require skilled workers to dismantle, sort and

process the electronic components. Recycling e-waste can create employment opportunities in recycling industries, contributing to local economic and job growth.

**Revenue Generation:** E-waste can generate revenue through various channels. Recycling companies can sell recovered precious metals and other valuable components to metal refiners. Additionally, refurbished mobile phones can be sold, providing an additional revenue stream.

**Environment - Cost Avoidance:** Recycling e-waste helps avoid the environmental costs associated with improper disposal. E-waste contains hazardous materials like lead, mercury, and brominated flame retardants. If not properly recycled, these substances can leach into the environment, polluting soil, water and air.

**Extended Lifecycle:** In many regions, there are regulations and policies that require electronic manufacturers to take responsibility for the end of life management of their products, including e-waste recycling.

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**Circular Economy - Opportunities** - Recycling e-waste supports the concept of a circular economy, where materials are continuously recycled and reused.

This can lead to development of new business models like leasing or subscription-based mobile phone services, where the manufacturer retains ownership and responsibility for recycling, repair and upgrading of devices. These models can ~~create~~ create ongoing revenue streams while minimizing waste generation.

PROCEDURE  
 Although the specific materials used may vary between mobile phones and their models, we will be taking an average of materials used in manufacturing of mobile phones.

Our mobile phones are made up of various metals. Some of them are

Copper → It is used to produce wiring for all kind of electronics. It conducts electricity and heat very efficiently. It is most frequently obtained from open cut - mines.

Yttrium → It is used to improve strength and hardness and reduces corrosion. It is mined with other metals and also used in tinting glass.

Lithium → It is essential for the production of cathodes in lithium-ion cells and salt lakes.

Cobalt → It is important for rechargeable battery circuits. It is also used in

DATE: .....

microchips.

Manganese → It makes electronics more resilient. It is also used in batteries.

Tungsten → It is a highly durable metal and used in phone's vibration.

Gold → It is used to make circuit boards because it is chemically stable and conducts electricity.

Aluminium → It is highly ductile in nature and is used in mobile phone cases and components.

OBSERVATION TABLE

Name of material	Quantity	Price/kg	Value
Aluminium	28 g	210	6.3
Steel	12 g	60	0.6
Copper	23 g	730	18.25
Lithium	40 g	30,000	1200
Sun	42 g	75	2.85

Q2: Materials Composition and their Economic Value in Smart

Material	g/unit	Rs/g	Rs/unit
1) Aluminium	5.9	0.21	1.24
2) Antimony	0.54	3.5	1.89
3) Arsenic	0.01	1470	14.7
4) Cobalt	6.3	2.8	17.64
5) Copper	14	0.73	10.22
6) Yttrium	0.6	43	25.8
7) Gold	0.04	6200	248
8) Lead	0.9	0.39	0.35
9) Neodymium	0.05	6.5	0.33
10) Dysprosium	0.2	600	120
11) Terbium	0.5	94	47
12) Nickel	1.5	1.95	2.93
13) Palladium	0.02	3850	77
14) Plastics	30	0.2	6.00
15) Platinum	0.004	3400	13.6
16) Praseodymium	0.05	20	1.00
17) Silver	0.244	82	20.00
18) Iron	8	0.09	0.72
19) Tin	1	5.44	5.44
20) Zinc	4	0.54	2.16
21) Gadolinium	0.3	54	16.2
22) Tantalum	2	78	156

Significance of Economic Assessment

- Resource allocation: Economic assessment plays a crucial role in efficiently allocating resources by evaluating the economic viability of different options, it helps identify the most effective and efficient use of resources, ensuring that they are allocated where they can generate the highest economic return.
- Policy formulation: Economic assessment provides a foundation for the formulation and evaluation of policies.
- Informed decision making: Economic assessment provides valuable information and data to make informed decisions regarding various aspects of an economy.
- Risk Management: Economic assessment enables the identification and management of economic risks.
- Economic assessment also helps in reducing the environmental impact.

Procedure:

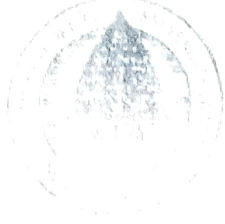
After looking how much valuable or precious metals our phone contains, I am going to conduct the survey in my building so that we could get to know e. the true or actual economic assessment

## Importance of economic assessment :

The economic assessment of e-waste is crucial for several reasons. Firstly, it helps identify the costs and benefits associated with e-waste management, including the extraction of valuable resources and the environmental impacts of improper disposal. This assessment guides policymakers, businesses, and stakeholders in designing effective and sustainable e-waste management strategies. Secondly, it highlights the economic opportunities that arise from proper recycling and resource recovery, such as job creation and cost savings through circular economy practices. Lastly, the economic assessment enables informed decision-making, encourages investment in recycling infrastructure, and fosters responsible consumption and production patterns, leading to a more sustainable and prosperous future.

## Conclusion

Concluding to the topic, the economic assessment of mobile phones is crucial and economically prosperous for a society in general, i.e., informed decision making, investment in recycling infrastructure, etc.



Tirumala Tirupati Devasthanams

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**Sri Venkateswara College**

(University of Delhi)

NAAC Grade A+

## **CERTIFICATE**

This is to certify that Economic Assessment of E-Waste was successfully conducted from **19 June 2023** to **30 June 2023** by the Department of History in the **Offline mode (both Indoor and Outdoor)** and its event report has been submitted to IQAC for records.

Event In-Charge  
**Department of History**  
**Sri Venkateswara College**  
University of Delhi  
New Delhi-110021

**IQAC Coordinator**  
**Coordinator, IQAC**  
**Sri Venkateswara College**  
(University of Delhi)  
Dhula Kuan, New Delhi-110021

**Principal**  
**PRINCIPAL (Acting)**  
**Sri Venkateswara College**  
(University of Delhi)  
Dhula Kuan, New Delhi-110021