

# WELCOME TO LECTURE ON FORENSIC PHYSICS (PART-1)



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# FORENSIC PHYSICS

- Counterfeit currency
- Glass
- Paint
- Soil
- Spurious Articles (Gold, Platinum, Automobile spares, zandu balm, etc.)
- Tool marks
- Track marks-Footprints, footwear marks & tyre marks
- Restoration of erased numbers of Vehicles.



# 100 RUPEES Note : Front

Multidirectional lines  
( Anti Scan lines )

Micro-Text  
( RBI & 100 )

Window Security  
Thread  
With Clear Text

Latent Image  
( 100 )

Watermark

See  
Through

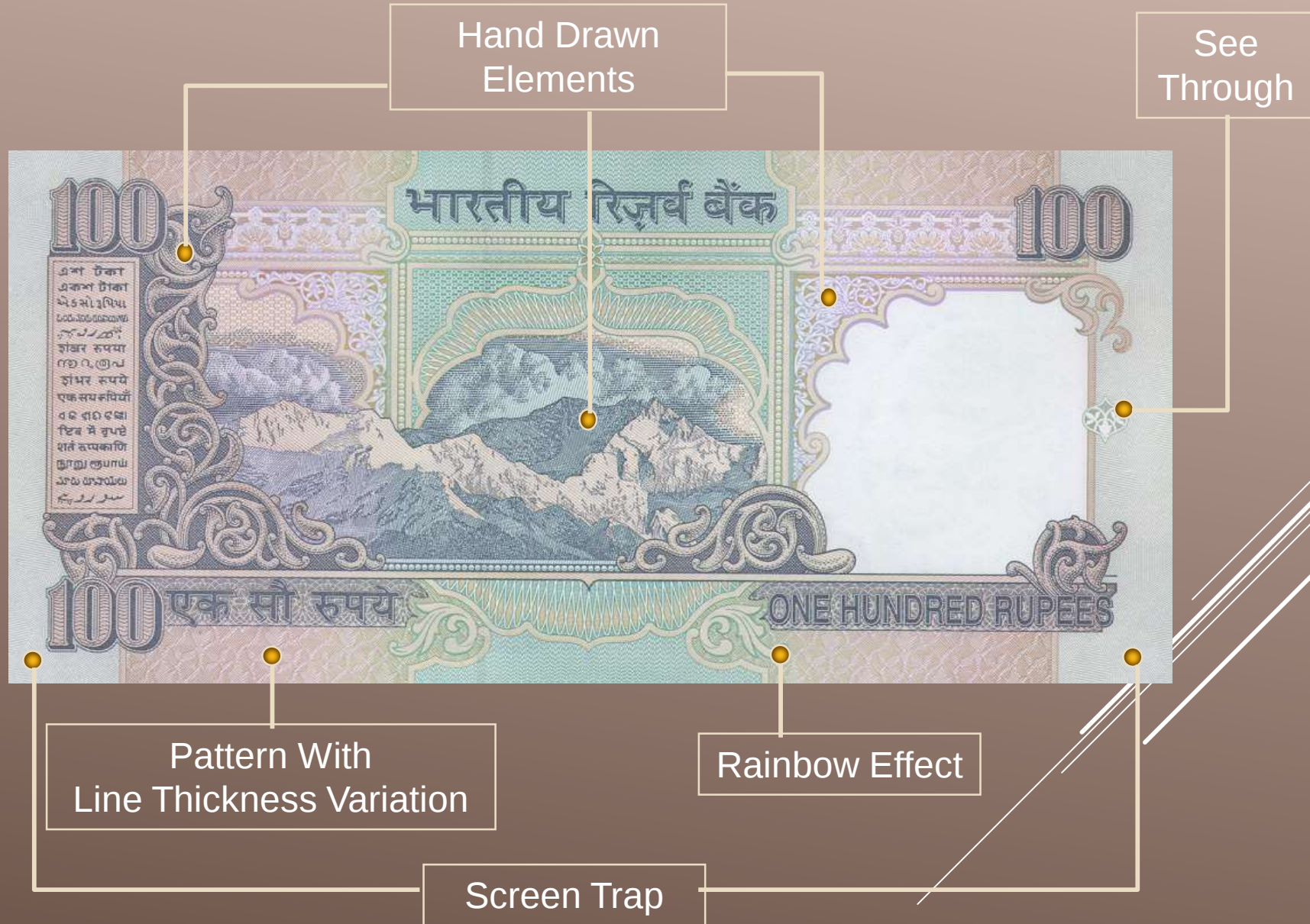
Id Mark  
/ Blind  
Mark

Fluorescent Ink  
( Numbering )

Hand Engraved Portrait



# 100 RUPEES Note : Back



# Security Thread



Rs. 100 notes contain a readable windowed security thread. It is partially exposed and partially embedded. When held against light, this thread looks as one continuous line.



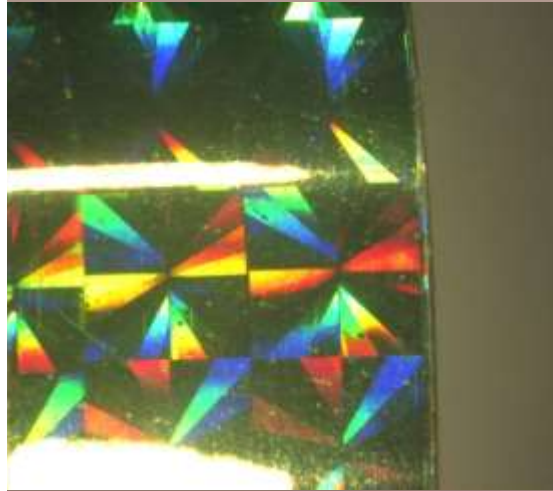
# SCREEN PRINTING FRAME



# SILVER COLOUR FOIL ROLL



# Green colour foil roll



# Intaglio Printing



- The portrait of Mahatma Gandhi, Reserve Bank Seal, guarantee and promise clause, Ashoka pillar emblems on the left, RBI Governor's signature are printed in intaglio i.e., in raised prints



# WATER MARK

**Genuine**



**Fake**



## Addl Water Mark

watermark



# Micro-letterings



- Micro-lettering provides additional security to the notes against counterfeiting.
- It appears between the Mahatma Gandhi portrait and vertical band
- Micro-printing “RBI 100” is printed that can be seen using magnifying glass.



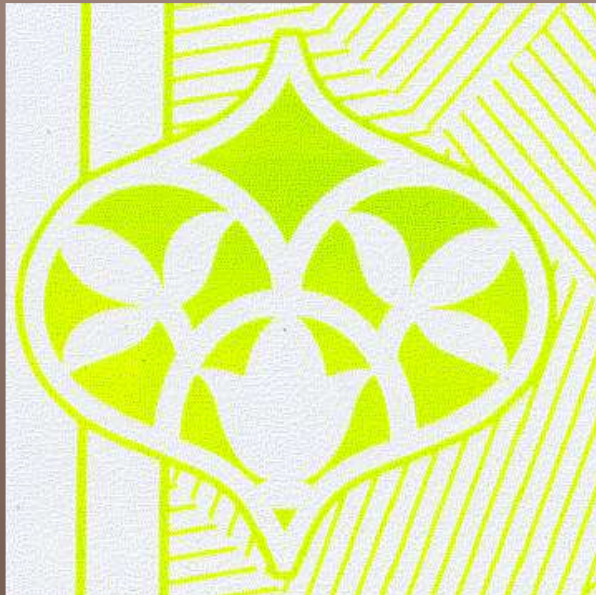
# LATENT IMAGE



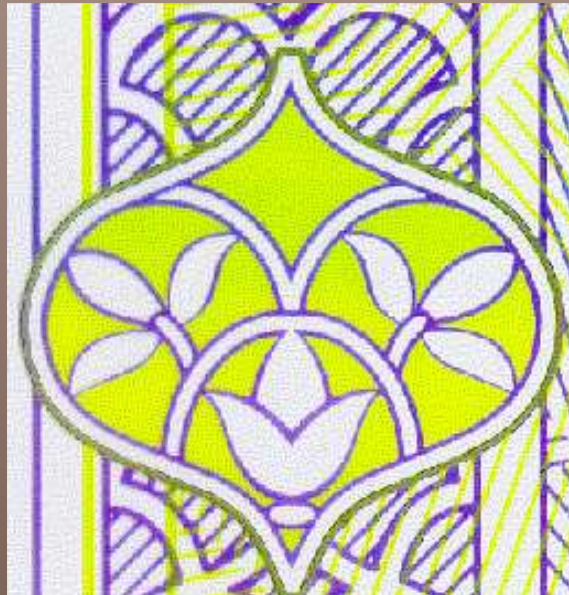
- Denomination “100” which is hidden in the vertical band is the **latent image**.
- The **latent image** “100” cannot be replicated by photocopiers.

The printing of both front and back is done in a single pass and designs are printed in front & back with perfect registration which renders the note a “see-through” effect.

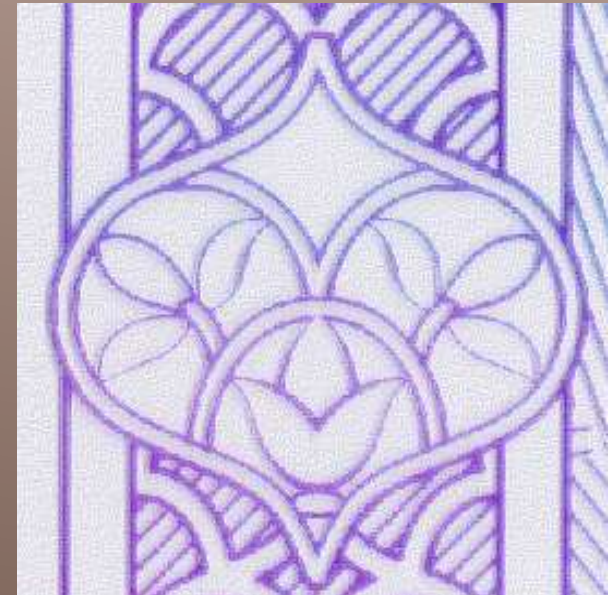
**FRONT**  
Design



**SEE – THROUGH**  
Design



**BACK**  
Design



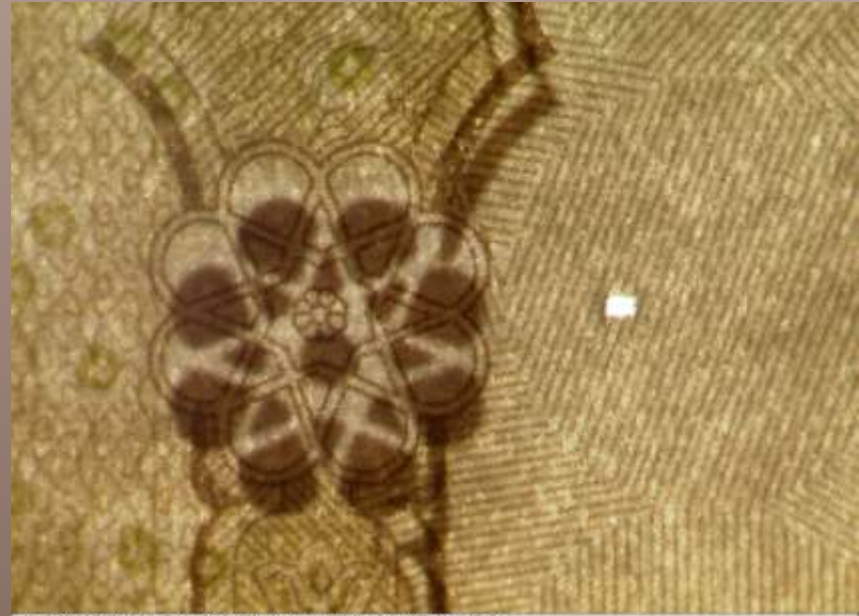
# SEE THROUGH REGISTER

**Genuine**



12/16 07/04/2005 Lights=Transmitted 100%, Longpows=VR, Bandpass=OFF, Mag=11.38  
Auto Exposure (Integration=1/8, Int=50%, Gain=306, Brightness=Auto, Contrast=Auto, ImageJ width =32.34 mm)

**Fake**



12/43 07/04/2005 Lights=Transmitted 100%, Longpows=VR, Bandpass=OFF, Mag=18.46  
Auto Exposure (Integration=1/8, Int=50%, Gain=306, Brightness=Auto, Contrast=Auto, ImageJ width =20.00 mm)

# Blind/ Identification Mark



An identification mark has been introduced in the note for visually impaired people.

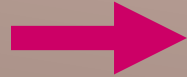
This mark is in intaglio printing and it is in different geometrical shapes for various denomination.

For Rs. 100—denomination, we have triangle '△' as the identification mark.



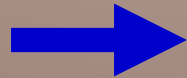
# IDENTIFICATION MARK

Rs.20



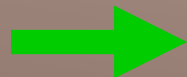
RECTANGLE

Rs.50



SQUARE

Rs.100



TRIANGLE

Rs.500



CIRCLE

Rs.1000



DIAMOND

# Ultra violet fluorescence

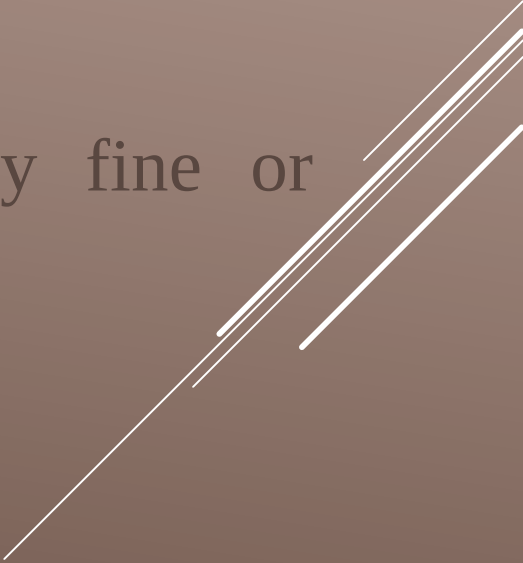
Genuine



fake



# LEGAL PROVISIONS

- ▶ Printing and circulation of forged notes offences under Sections 489 A to 489 E of the Indian Penal Code
  - ▶ It is punishable in the court of law by fine or imprisonment or both
- 
- A series of four parallel white diagonal lines in the bottom right corner of the slide, slanting upwards from left to right.

Original



Spurious

Spurious

Original



Original



Duplicate



Original



Duplicate



SPURIOUS

ORIGINAL



SPURIOUS

ORIGINAL



SPURIOUS



ORIGINAL









The Rx mentioned on every Remdesivir vial is missing

**FAKE**



Alignment error

Capitalisation error

Capitalisation error

Capitalisation error

**BOOM**  
**FACT CHECK**  
\*\*\*



Duplicate



Original

Duplicate



FORM - FF02  
ANDI  
FOR LA



Original

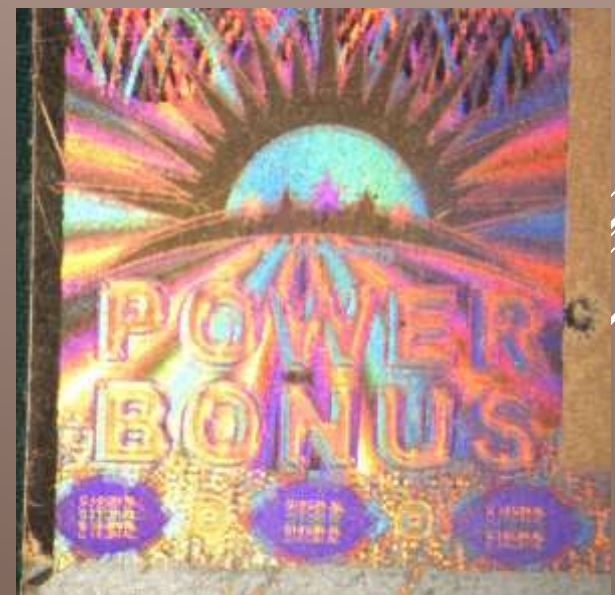
Original



Magnified view



Spurious



Magnified view

Original



Spurious



Original



Spurious



Original



Spurious



Original



Original



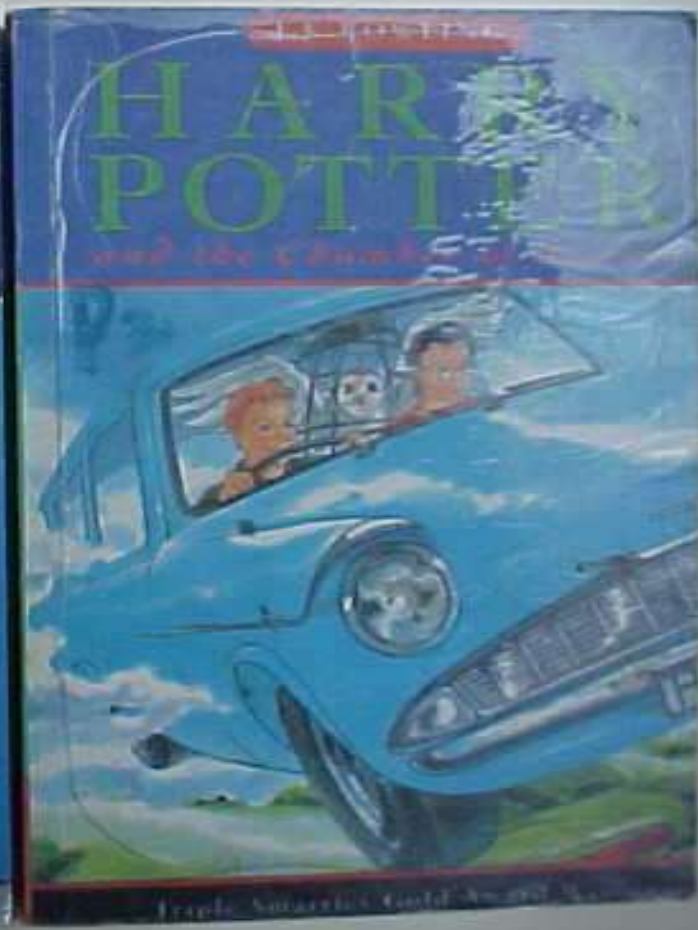
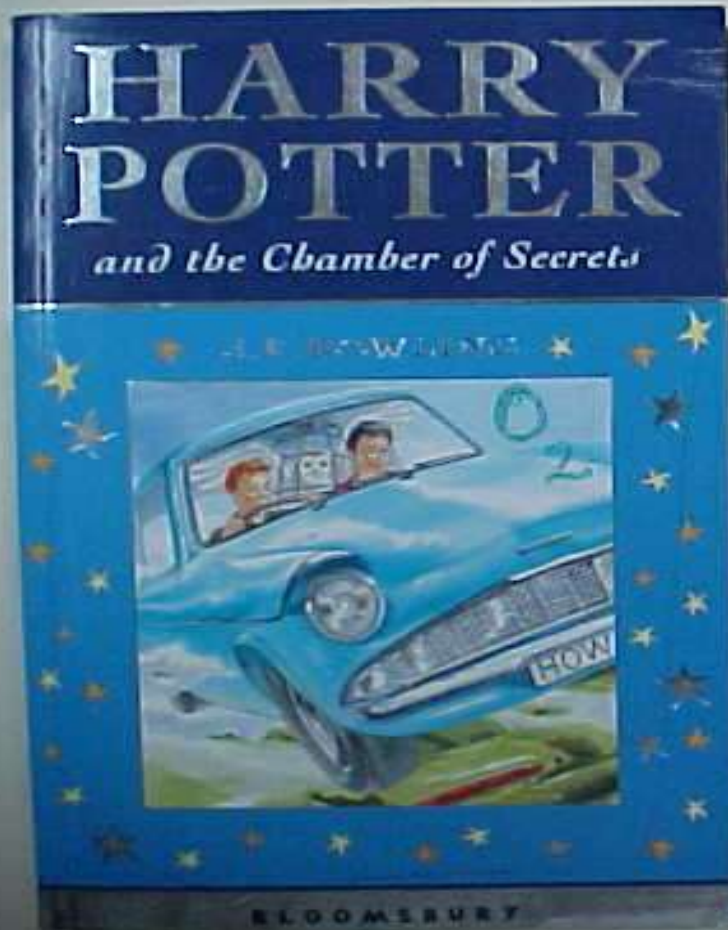
Spurious



Spurious

ORIGINAL

PIRATED



ERASURE MARK OBSERVED  
BEFORE NUMERAL "8"

8

A SHEET OF PASSPORT REMOVED AND  
PASTED WITH ANOTHER SHEET  
(UNDER U-V LIGHT)



# FAKE REVENUE STAMPS

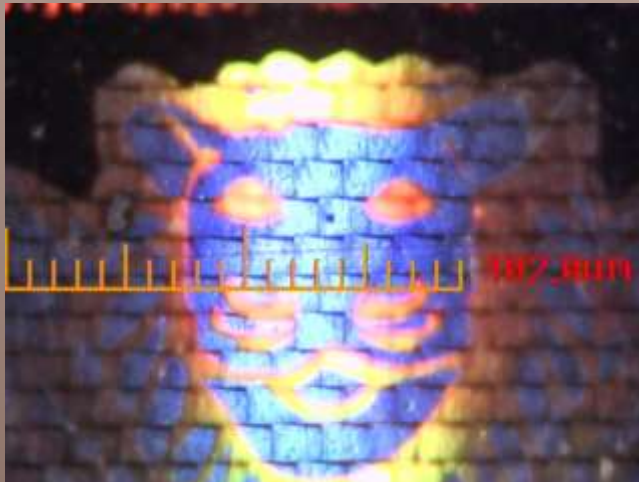


# GENUINE REVENUE STAMPS

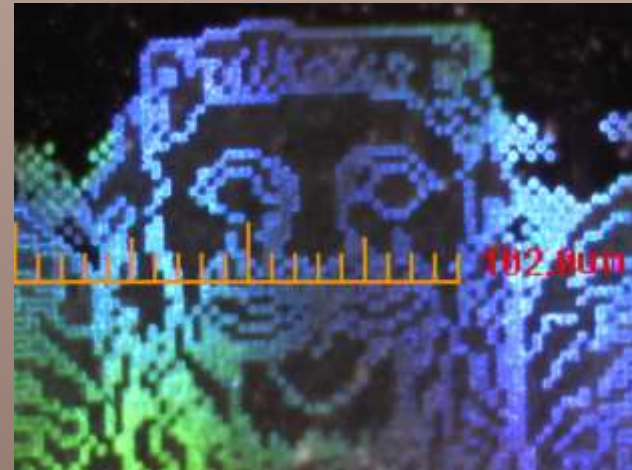


# VOTER ID HOLOGRAM ANALYSIS

Genuine



Fake



# Voter ID Hologram analysis

Genuine

Fake



AP  
PH



OF







# Ash Analysis



जी पी 12/ संशो  
GP 12/Rev

एस सी SC/  
इ. म. रे. S.C.R.

999096

प्रथम श्रेणी मुफ्त पास  
FIRST CLASS FREE PASS

विमान Dept. T.P. दिनांक Date 01.7.03  
पास Pass Mr. H. A. A. 222  
along with wife  
only

पदनाम Designation Goods Dr. (Metd)  
कार्यालय Office SSIN2B  
From SC से  
To CSTM तक  
Via N2B MMR होकर  
Over SC, C रेलों पर Rlys.  
बीर वापसी में AND RETURN  
Via Same होकर  
To SC तक  
Over C, SC रेलों पर Rlys.  
Available upto वर्षधि 31.10.03 तक  
यात्रा विराम की अनुमति  
Permission to B/J at  
बहिर्यात्रा Outward Journey N2B, J  
वापसी यात्रा Return Journey A, B, M, N  
क्यों दिया गया Why Granted C

हस्ताक्षर Signature  
पदनाम Designation

स्टेशन सुपरिन्टेन्डेंट  
Station Superintendent  
S.C. RV. NIZAMABAD





Thank You  
Thank You  
Thank You!!!!