

# **Awareness Session**

**Security Features of New Design  
Currency Notes.**



# SECURITY FEATURES CLASSIFICATIONS

- **OVERT:** Features for PUBLIC.
- **SEMI-COVERT:** Features for CASHIER and other Bank staff.
- **COVERT/FORENSIC :** Features for LABORATORY and AGENCIES.

# **TYPES OF PRINTING**

- **LITHOGRAPHY PRINTING**

It is abrasive from the back

- **Intaglio printing**

which is abrasive from the front(Rs.50 and above)

- **Offset printing**

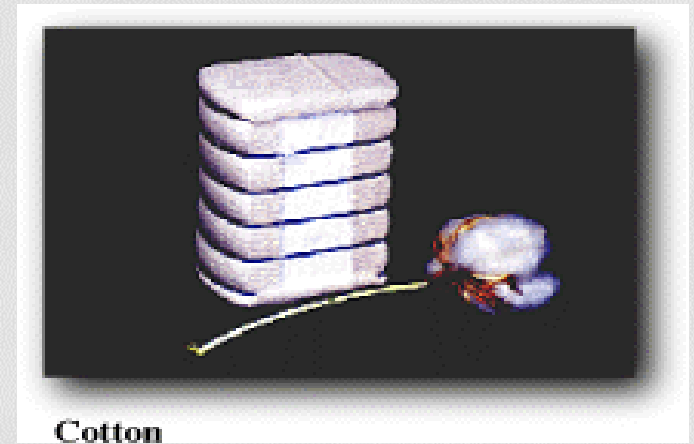
(Rs.5, Rs.10 and Rs.20/-)



# PAPER

**Banknote paper is made from cotton pulp, which gives it**

- **Better durability than other papers**
- **Distinctive feel.**
- **If bank note paper is held under ultra violet light it is dull compared to other papers.**



Cotton

# **WATER MARK**

- Image in paper created during the process of paper formation by modification in its density and thickness in particular areas.
- Presently two types of Watermarks are being used in our currency notes

## **Watermark**

- Cylinder mold Watermark
- Electrotpe Watermark



# Water Marks

•Cylindrical Mold  
Watermark



•Electrotype Watermark

# Watermark, cylinder mold

- **Cylinder mold watermarks are based on an exclusive production technology that is only available to a small circle of suppliers.**
- **Cylinder mold made mark is still virtually impossible to copy by any other process including scanning, photocopying or printing.**
- **This watermark creates various shades of grey tones and gives a three-dimensional impression.**





# Electrotype Watermark

- **Electrotype watermark is created during paper formation and is used for special highlighting of important information. This type of watermark is very light (since it is very thin) and very clear (due to the sharp edges).**





# Security Thread

- A metallic or polyester strip that is embedded in bank note paper during paper formation process and cannot be reproduced by Color copier.
- Microprint can be printed on to the security thread.
- There are two types of thread embedded into the paper one is visible (window thread) & the other is invisible
- Threading is a difficult feature to counterfeit but some counterfeiters print a thin black line or a thin line of varnish in the area of the thread.





•Security Thread





# Embedded Feature Rs 500



نوٹ کے سامنے کے رخ پر بائیں جانب ایک عمودی حفاظتی دھاگہ ہے، جس پر نوٹ کی مالیت "500" دیکھی جاسکتی ہے۔ حفاظتی دھاگہ نوٹ کے سامنے کے رخ پر نثری رنگ کے چھوٹے چھوٹے ٹکڑوں کی شکل میں نظر آتا ہے۔ جب نوٹ کو روشنی کے رخ پر دیکھا جائے تو دھاتی دھاگہ ایک لکیر کی شکل میں نظر آتا ہے۔ جب نوٹ کو الٹرا وائلٹ (Ultra-violet) روشنی میں دیکھا جائے تو حفاظتی دھاگے میں پیلی اور گلابی مائل سرخ چمکدار پٹیاں نظر آتی ہیں۔

## See Through Register

- Elements of design printed on both sides of a banknote that register perfectly when observed in transmitting light.

نوٹ کی مالیت کا ہندسہ جزوی طور پر سامنے کے رخ پر بالائی دائیں جانب اور جزوی طور پر پچھلے رخ پر بالائی دائیں جانب درج ہے۔ جب نوٹ کو روشنی میں دیکھا جائے تو نوٹ کی مالیت کا ہندسہ مکمل نظر آتا ہے۔





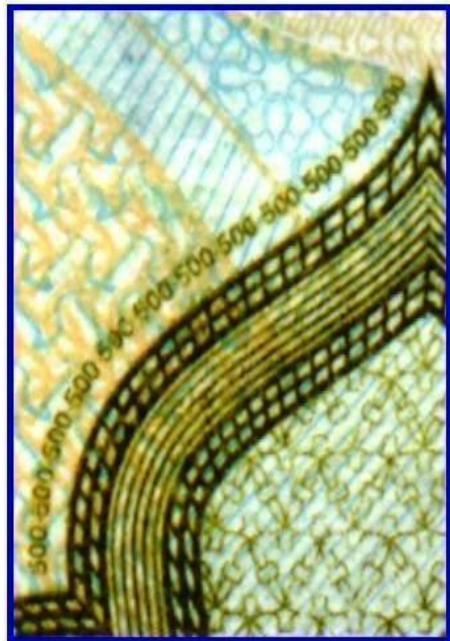
# Microprint

- Printed image or text visible only with magnifying device.

☆ نوٹ کے بالائی دائیں جانب نمبر شمار کے نیچے افقی شکل میں اور چلی بائیں جانب حفاظتی دھاگے کے قریب عمودی شکل میں باریک لکھائی میں '5000' کا ہندسہ طبع کیا گیا ہے۔









# Braille features

- Marks for the blind are closely involved with intaglio printing as they are what the blind people can feel with their fingertips. Depending on the denomination, the "finger picture" will differ..



# Identification Mark

Rs. 20/-	One	Raised horizontal lines appear in left side which enable the visually impaired persons to recognize the denomination of the note.
Rs. 50/-	Two	
Rs. 100/-	Three	
Rs. 500/-	One	Raised circle appears at the left side which enables the visually impaired persons to recognize the denomination of the Note
Rs.1000/-	Two	
Rs. 5000/-	Three	

# Latent Image

- Image made by intaglio printing and observed while looking at a banknote at a particular angle.





# NUMBERS

- One may find it strange, but the numbers on the banknote usually have relation to the security features, too. Each banknote's number is unique, and they never repeat.

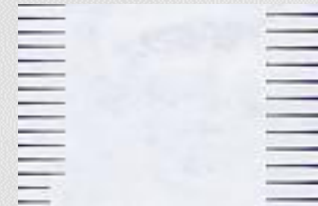
نوٹ کی بالائی دائیں جانب Prefix کے ساتھ سات عدد پر مشتمل نمبر شمار درج ہے، جب کہ یہی نمبر شمار  
نچلے بائیں کنارے پر واٹر مارک کے نیچے درج ہے۔ دونوں نمبر شمار متناطیس روشنائی سے طبع کئے گئے  
ہیں۔

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# Intaglio Printing

- "Intaglio" (It is an Italian word) means "raised". Engraving is the oldest and most common of the intaglio techniques. Lines are cut into metal plate. After the process of Printing we can feel them with our fingers. And at the same time it's applied so strongly that you can't scratch the paint off.





# Optically Variable Ink

- **Optically variable inks (OVI) changes colors when the viewing angle is changed. It is an expensive ink and are generally used in a small portion of note.**
- **However, they offer unique protection against counterfeiting.**



# Anti copying Features

- **Anti-copy features refer to the specially drawn lines and decorations which make the banknote impossible to be copied with the help of specialized copying equipment.**





# Identifying Forged Notes

Forged notes usually exhibit certain basic differences, which make their identification easy. There are number of distinguishable features when compared with genuine notes. Besides, following differentiating features can also be found.



# HOW TO SPOT A COUNTERFEIT NOTE

S #	Action	Genuine	Counterfeit
1	<b>Feel the Paper</b>	A new genuine note has very crisp paper with a distinctive feel	The paper used is often of inferior quality. It tends to be a lot floppier than the real thing. <u>We are all used to handling cash on an everyday basis and know the feel of a real note even if we are not aware of it.</u>



# HOW TO SPOT A COUNTERFEIT NOTE

S #	Action	Genuine	Counterfeit
2	<p>Feel the Print</p> <p>Look at the Print</p>	<p>The Print on a note Produces a distinct feel due to intaglio areas resulting in unsmooth surface. This effect is more pronounced on brand new note. Multicolored fine line</p>	<p>The raised effect of intaglio is not often reproduced and most counterfeits are flat all over. Color difference.</p>

## HOW TO SOPT COUNTERFEIT NOTE

S #	ACTION	GENUINE	COUNTERFEIT
3	Hold the note up in the light	Bank notes carry thread and watermark. A thread will appear as a solid line when viewed in the light along with watermark	<b>Some counterfeiters attempt to simulate a watermark but it will be lacking in a manner seen in an original note. The image will be visible even without the light. Some also attempt to reproduce the effect of the thread but again it is visible when seen across the transmitted light.</b>



## HOW TO SPOT COUNTERFEIT NOTE

S #	Action	Genuine	Counterfeit
4	Magnifying Glasses	Getting a view with magnifying glass, the print quality will look crisp. You can also read any of the micro text messages on the note.	It depends on how the note is counterfeited. Presence of cyan yellow magenta and black dots, a raster line or poorly defined lines are main indicators. Another thing is the major loss of detail and micro texts of note will be difficult to read if not impossible.

## HOW TO SPOT COUNTERFEIT NOTE

S #	Action	Genuine	Counterfeit
	UV Lamp	<b>If seen with ultra Violet lamp, genuine note will appear dull.</b>	<b>Counterfeiters will not always counterfeit what can't be seen in normal light and may have omitted a simulation of an ultraviolet feature. The paper they use is bright and it glows under UV Lamp</b>
6	Try to tear the note	It is difficult to tear along an edge.	Easily torn.



# Printing Cost per Piece

• <u>Denomination</u>	• <u>Printing Cost</u>
• Rs. 5/-	• Rs. 1.28
• Rs. 10	• Rs. 1.28
• Rs. 20/-	• Rs. 2.00
• Rs. 50/-	• Rs. 2.62
• Rs. 100/-	• Rs. 2.200
• Rs. 500/-	• Rs. 2.300
• Rs. 1000/-	• Rs. 3.100
• Rs. 5000/-	• Rs. 3.6896

**Thank You**