



## INSTRUCTIONS FOR LIVE CLASS

1. If **audio/video stuck then refresh page by Ctrl+SHIFT+R**; If electricity / internet outage, fear not, because recording will be available in your account.
2. Keep four things ready before the class 1) Handout Print 2) Two pens of different colors 3) Unruled A4 sized pages 4) One report file- to store printouts & papers.
3. If doubts in lecture itself-> Google query form, available in the discussion group.

### UPSC Prelims-2019: Essential Reading List for GS

<p><b>Geography</b></p> <ul style="list-style-type: none"><li>- NCERT: First class 11-12's four textbooks on physical, Indian &amp; human geography. Then NCERT 7-10 Social Science- only those chapters which are not covered in Class 11-12.</li><li>- Rajtanil's Geography Lecture series.</li><li>- Goh Cheng Leong: All chapters EXCEPT 4 to 10.</li><li>- Majid Hussain's Geography of India: All chapters EXCEPT 1, 4, 5, 6, 9, 14, 15, 16.</li><li>- If time, IYB-2019 ch. 1 and 30, else ignore it.</li></ul> <p><b>Agriculture</b></p> <ul style="list-style-type: none"><li>- NCERT Geography, Science Textbooks.</li><li>- Budget, Eco survey, Yojana, Kurukshetra</li></ul> <p><b>Environment</b></p> <ul style="list-style-type: none"><li>- NIOS PDF on Environment</li><li>- ShankarIAS's Book, IYB19 Ch. 12</li><li>- NCERT Chemistry Class 11: Chapter on Environmental Chemistry.</li><li>- NCERT Biology 11-12: selective study of chapters related to flora-fauna, biotech</li></ul> <p><b>Economy</b></p> <ul style="list-style-type: none"><li>- Theory, Contemporary, and Current issues from Mrunal's lecture series and its handouts.</li><li>- No need for NCERT 9-10 or Class 12 Micro/Macroeconomics or Old NCERT.</li><li>- But, to cultivate vocabulary &amp; expression skills for Mains, read following:<ul style="list-style-type: none"><li>- NCERT Class 11 Indian Economic Development.</li><li>- Introductions and conclusions of Last 3 years' economic surveys from <a href="http://indiabudget.gov.in/">http://indiabudget.gov.in/</a></li><li>- Chief Editor's Desk (Preface) of last 2 years' Yojana &amp; Kurukshetra magazines from <a href="http://yojana.gov.in/Recent_archive_2018.asp">http://yojana.gov.in/Recent_archive_2018.asp</a> (change year number for getting previous Archives)</li><li>- Refer to Topicwise Papers &amp; Trend analysis available: Mrunal.org/Prelims and Mrunal.org/Mains</li></ul></li></ul>	<p><b>Polity</b></p> <ul style="list-style-type: none"><li>- Indian Polity by M.Laxmikanth</li><li>- Governance in India by Laxmikanth.</li><li>- IYB19: ch.2,3, 20, 28.</li><li>- Current: Notable judgements, Committees, appointments.</li><li>- PrsIndia.org: passed acts</li><li>- if time permits: NCERT Social Sci and PolSci</li></ul> <p><b>International Relations</b></p> <ul style="list-style-type: none"><li>- IR groups theory: any GS Manual's reference table. Followed by CA from Newspaper/PDF/Mags.</li></ul> <p><b>History-Culture</b></p> <ul style="list-style-type: none"><li>- No need for old NCERTs.</li><li>- TN Class 11-12, new NCERT</li><li>- Nitin Singhania, Spectrum, Pratik's Lecture series.</li></ul> <p><b>Science Tech</b></p> <ul style="list-style-type: none"><li>- Ravi Agrahari's Science-Tech book.</li><li>- (then, If time permits) Read all chapters: NCERT 7-10. (then, If time permits) Read only selective: NCERT 11-12, and GS Manual.</li></ul> <p><b>Current Affairs (CA)</b></p> <ul style="list-style-type: none"><li>- Any one newspaper: Daily IndianExpress or theHindu. Not both! Only one.</li><li>- Make newspaper NOTES ONLY FOR Optional Subject, Cases Quotable for Essay / GSM4, &amp; factoids imp. for UPSC interview i.e. about your home-state, hobbies, graduation.</li><li>- Any one PDF/Mag compilation: VisionIAS, DrishtiIAS, insights,GKT,iasbaba etc.</li><li>- It's true that not many Qs are coming from PDF/Mag compilation, but if you manually try to make your own current affairs notes, you'll never finish other parts of syllabus.</li></ul>
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# Economy for UPSC

Economy 6 Pillars™	Prelims Paper-1 (GS) (out of 100 Qs)			Mains GSM-1-2-3 (Out of 750 Marks)			Remarks
	2016	2017	2018	2016	2017	2018	
1_Money Banking, Finance & Insurance	6	6	7	25	0	0	<b>Most useful in Prelims but less in Mains</b>
2_Budget, FC, GST	3	3	4	12.5	30	25	<i>Second lowest utility after 5_Infra</i>
3_Intl_Trade, BoP	11	4	4	25	0	30	<i>Third lowest utility after 2_Budget.</i>
4_Sectors, GDP, Inflation	4	8	3	25	60	50	<b>Useful for both prelims and Mains.</b>
5_Infra	2	4	1	37.5	10	15	<i>Lowest utility among 6 pillars.</i>
6_HRD	3	4	6	50	40	60	<b>Useful for both prelims and Mains.</b>
Total	29 Qs	29 Qs	25 Qs	175m	140m	180m	

## PILLAR #1-A) MONEY

### 1.1 BARTER SYSTEM & ITS DISADVANTAGES: (वस्तु विनिमय प्रणाली)

- Double co-incidence of \_\_\_\_\_ (आवश्यकताओं का दोहरा संयोग).
- Search Cost / Cost of Transaction is high.
- Storage of perishable commodities is difficult, results in loss of value.
- Doesn't encourage specialization and division of labour.
- Divisibility & **Fungibility** problems:
  - Fungible item= Division & Mutual substitution possible e.g. Gold bars, Currency Notes & Coins. **Non-fungible** items examples: \_\_\_\_\_

### 1.2 MONEY: FUNCTIONS OF (पैसे के कार्य)

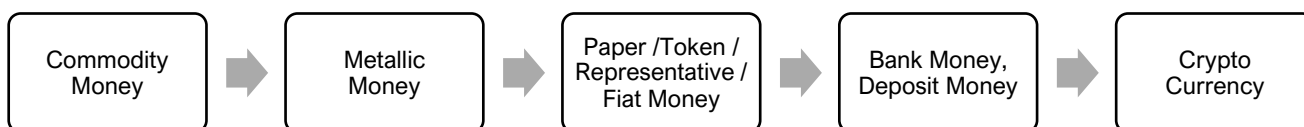
Table 1: Money was invented to overcome the limitations of barter system.

Primary [प्राथमिक]	Secondary (S-T-D) [सहायक]	Contingent [प्रासंगिक]
1. _____ (मूल्य का मापक). gm=wt, ml=vol, ₹=value  2. _____ (विनिमय का माध्यम). Buy & Sell	1. _____ of Value (मूल्य का संचय) 2. _____ of Value (मूल्य का स्थानांतरण). Soldier in Kashmir to parents in Kanyakumari 3. Deferred Payments (स्थगित भुगतानों का मानक). Airtel buy iPhoneX @3499 only per month x 24 months.	1. Basis of credit system, Financial markets 2. Employing factor inputs 3. Creation & Redistribution of National Income

**Food Essay for thought:** Money is not the root of all evil, greed is. पैसा नहीं, लोभ सभी बुराईओं का मूल है.



## 1.3 MONEY: EVOLUTION & TYPES



### 1.3.1 Commodity Money (Intrinsic value? Yes)



- Iron Nails, Bear Pelts, Cocoa Beans, Whale Teeth, Gold Nuggets
- **Problems?** Perishable, not uniform, not pure, foreigners may not accept. can cause hyperinflation.

### 1.3.2 Metallic Money (Intrinsic value? Yes)

- Traders & Kings: stamped their marks on gold nuggets for uniformity & trust.
- Indo Greek kings & Kushana kings issued gold coins, but Gupta Gold coins most spectacular- king is playing Veena, shooting animals, standing with wife, taking selfis.
- Delhi Sultanate Kings: Silver Tanka. Sher Shah Suri Rupiyah silver coin. Akbar: Muhr.
- **More SELF STUDY:** *History of Indian coins from Nitin Singhania (2<sup>nd</sup> Ed.) Ch.23*



Gupta Coin: ~8 gm GOLD  
**Full Bodied Coins**



50 paisa modern coin: ~4 gm steel  
**Token Coins (प्रतीककात्मक)**

Gupta Coin: ~8 gm GOLD <b>Full Bodied Coins</b>	50 paisa modern coin: ~4 gm steel <b>Token Coins (प्रतीककात्मक)</b>
Value (अंतर्भूत मूल्य) is MORE than its Value (अंकित मूल्य)	is LESS
<b>Debasement:</b> decreasing the amount of metal in coins. Usually happens when king's treasury gets poor e.g. Aurangzeb, Roman Kings.	<b>1330s:</b> Tughlaq's Token coin experimentation = #EPICFAIL because Thomas Grisham's Law- good money drives out bad money.
Coinage Act 2011 prohibits melting of coins.	Cupronickel metal used to discourage melting.

### 1.3.3 Paper Money (Intrinsic Value? No)

- **Fiat money (वैधानिक मुद्रा):** Fiat = issued by the legally binding command / order of the Government / King.

	<ul style="list-style-type: none"> <li>- <b>Government issues:</b> All coins upto Rs.1,000. Rs. 1 Note signed by Finance Secretary. Under Coinage Act.</li> <li>- <b>Rs. 1 note</b> doesn't contain "I promise to pay bearer..."</li> </ul>
	<ul style="list-style-type: none"> <li>- <b>RBI issues:</b> Currency notes signed by Governor. Presently Rs.10 to Rs. 2,000. Under RBI Act.</li> <li>- Currency notes have Governor's sign: "I promise to pay bearer..."</li> </ul>

- When fiat money (currency/ coins) is legally valid for all debts & transactions throughout the country, it's called a **Legal Tender**.
- G-Sec, T-Bill, Shares, Bonds, DD, Cheque, ATM, Cards, Kirana coin, Casino coin, Commemorative coin, Bitcoins: Are they fiat money or legal Tenders? Ans. Yes / No



Table 2: Fiat Money: Two types of legal tenders

<b>A) Limited legal tenders</b> <b>(सीमित वैधानिक निविदा)</b>	<b>B) Unlimited legal tenders:</b> <b>(असीमित वैधानिक निविदा)</b>
	
Payment beyond a limit _____ refused.	Payment beyond a limit _____ refused.
<ul style="list-style-type: none"> <li>- Coinage Act 2011</li> <li>- Rs. 1 / above =&gt; upto Rs.1000</li> <li>- 50 paisa x 20 coins=&gt;upto Rs.10</li> <li>- Below 50 paisa withdrawn (2011)</li> </ul>	<ul style="list-style-type: none"> <li>- RBI Act 1934- Section 26: Every bank note is legal tender in India. Settle any amount of debt.</li> <li>- But Finance Act 2017: “cash transactions for less than Rs.2 lakh only,” Beyond that use Cheque, DD, NEFT etc. else penalty= entire amount.</li> </ul>

**MCQ: Which one of the following correctly describes the meaning of legal tender money?(Asked in UPSC-Pre-2018)**

- The money which is tendered in courts of law to defray the fee of legal cases
- The money which a creditor is under compulsion to accept in settlement of his claims
- The bank money in the form of cheques, drafts, bills of exchange, etc.
- The metallic money in circulation in a country

**MCQ: Consider the following statements (Asked in UPSC-CDS-2011-II)**

- In India the minimum denomination coin acceptable for transaction is 50 paise.
- Coins below 50 paise is not a legal tender for payment.

Which of the statements given above is/are correct?

- Only 1
- Only 2
- Both 1 and 2
- Neither 1 nor 2

### 1.3.4 (NEW) Mahatma Series Currency Notes in India

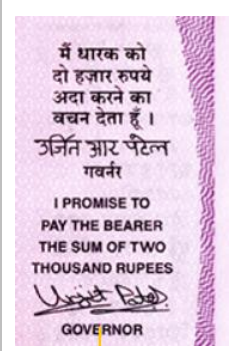
₹ 10	Sun Temple, Konark, Odisha. 13 <sup>th</sup> Century Narsimhadev-I
₹ 20	(update when/if released)
₹ 50	Humpi Chariot from Vittala Temple, Karnataka
₹ 100	Lavender color. Rani ki Vav on Saraswati river, Patan. Rani Udaymati for King Bhima-I of Chalukya / Solanki dynasty in 11 <sup>th</sup> century, UNESCO Heritage site
₹ 200	Sanchi Stupa, Madhya Pradesh.
₹ 500	Red Fort, Delhi by Shah Jahan. 26 <sup>th</sup> January parade chief guests= <b>2018</b> : 10 ASEAN leaders; <b>2019</b> : South Africa president Cyril Ramaphosa
₹ 1000	(update when/if released)
₹ 2000	Mangal Yaan / Mars Orbiter Mission, 2013
<b>New rupee symbol</b>	- ₹: through competition by Dept of Eco.Affairs in 2010. Designed by D.Udaya Kumar (Associate Professor @IIT Guwahati)
<b>Nation Symbol</b>	- Lion Emblem: Sarnath Pillar, Uttar Pradesh. - “Satyamev Jayate”: Mundaka Upanishad
<b>Languages</b>	While 8 <sup>th</sup> Schedule has 22 languages, but currency note has only 17
<b>Visually impaired</b>	old series notes have square (50), triangle (100), circle (500) diamond (1000) new series notes have bleed lines, raised printing of Gandhi etc.

You can read more about currency notes' features at <https://paisaboltahai.rbi.org.in>



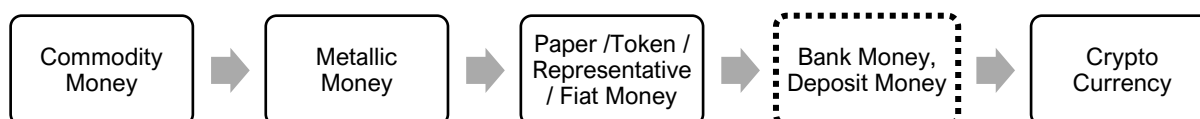
### 1.3.5 “I promise to pay the bearer...”: Meaning?

Currency note is zero interest, anonymous bearer bond. This bond's promise means...

	<p><b>Colonial / old times:</b> Promised to convert into full bodied gold or silver bars / coins worth the equal value in weight. E.g. 1 US Dollar = ~14 grams of gold. 1 British pound = ~73 grams of gold.</p> <p><b>Modern times:</b> Conversion into other notes and “token coins” of equal face value. ₹ 2000 = 500 x 4 Nos.= 100 x 20 Nos etc. Not inflation adjusted value. Not linked with weight of gold or silver. Not bound to honor this promise for demonetized notes after 31/12/16.</p>
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#### 1.3.5.1 Demonetization of Fiat Money (विमुद्रीकरण: Previously 1946, 1978)

- 8/Nov/2016: FinMin-> Dept of Economic Affairs gazette notification to ban the “Special Bank Notes” (SBN) of Mahatma Gandhi series Rs.500 and 1000.
- Specified Bank Notes (Cessation of Liabilities) Act 2017: RBI not required to honor “I promise to pay...”. Old notes can't be kept except for research or numismatics or museum- and that too in limited amount!



## 1.4 BANK MONEY / DEPOSIT MONEY & DIGITAL PAYMENT SYSTEMS

### 1.4.1 Paper orders: Cheque, Demand Draft (DD)

- Viceroy Ripon's Negotiable Instruments Act, 1881 (परक्राम्य लिखत अधिनियम):
- Objective? \_ \_ \_ \_ \_
- 2017 Amendment: 20% interim compensation @ Trial court (विचारण न्यायालय) 20% deposit before appeal in higher court (अपील न्यायालय)
- **THREE parties in a cheque:** 1) Drawer (Sender), 2) Drawee (Bank), 3) Payee (Recipient)
- **THREE Types of cheques:** 1) **Stale:** Not withdrawn in 3 months, 2) **Post-dated:** After a specific date, 3) **Anti-Dated:** Before a specific date.
- **Open / bearer cheque:** No 'crossing'. Anyone can encash.
- **Outstation Cheque:** collection charges outside home branch. **At par cheque:** no such collection charges.
- **IFSC code:** Indian financial system code- 11 alphanumeric numbers to identify the bank branch, just like PINCODE identifies an area.
- **MICR code:** Magnetic Ink Character Recognition. 9 digits code written in Iron Oxide ink for automated clearance.
- **NPCI's CTS-2010:** Cheque Truncation System- scanned image of cheque sent to the drawee branch for faster clearance without theft or tempering. MICR readers NOT required.
- **Demand Draft:** can't be dishonored because amount is prepaid.
- **Over Draft:** When person's bank balance goes zero, still he's allow to draw money (as a loan). Pradhan Mantri Jan-Dhan account has *Overdraft* upto Rs 5,000/- with certain conditions.





## 1.5 ELECTRONIC ORDERS / DIGITAL PAYMENT / CASHLESS ECONOMY



### 1.5.1 CBS ( full form: \_\_\_\_\_)

It's a banking software with web-platform for centralized data management & branchless banking. Finacle (Infosys); BanCS (TCS); E-Kuber (RBI)

#### MCQ: The term 'Core Banking Solutions' correct term? (Asked in UPSC Prelims-2016)

1. It is a networking of a bank's branches which enables customers to operate their accounts regardless of where they open their accounts.
2. It is an effort to increase RBI's control over commercial banks through computerization.
3. It is a detailed procedure by which a bank with huge non-performing assets is taken over by another bank.

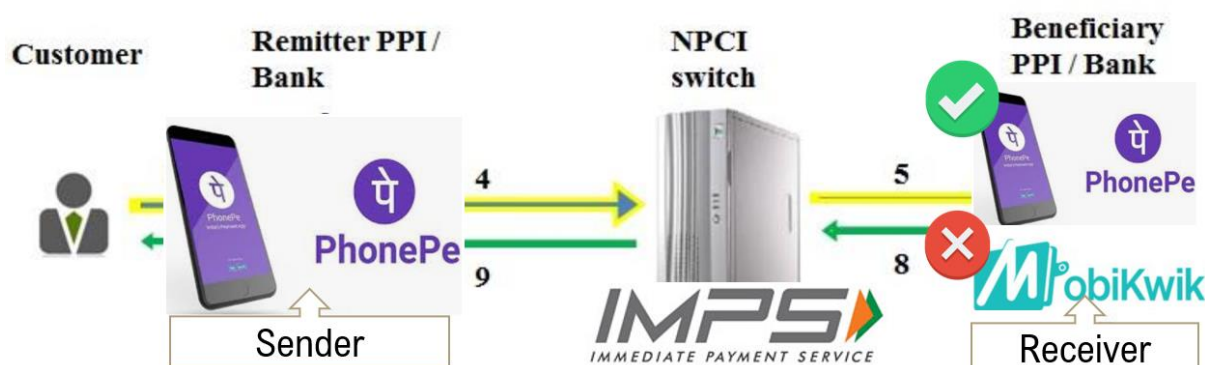
**Answer Codes:** (a) 1 only      (b) 2 and 3 only      (c) 1 and 3 only      (d) 1, 2 and 3

Table 3: Digital Payment Systems

Real time / Instant Settlement	Delayed / Batch Settlement
<b>RBI's RTGS:</b> <ul style="list-style-type: none"> <li>- Full form:</li> <li>- Transfer minimum 2 lakh to Rs. 2000 crores (SBI).</li> <li>- Meant for corporates and high value transactions.</li> <li>- Only in working hours.</li> <li>- Service fee + GST applicable</li> </ul>	<b>RBI's NEFT:</b> <ul style="list-style-type: none"> <li>- Full form:</li> <li>- Transfer upto Rs.10 lakhs (SBI). Settles net amount between banks at the interval of _ _ _ _ minutes / hour.</li> <li>- Total _ _ _ settlements from 8 am to 7 pm on working days.</li> <li>- Service fee + GST applicable</li> </ul>
<b>NPCI's IMPS:</b> <ul style="list-style-type: none"> <li>- Full form:</li> <li>- 24x7 via mobile, internet.</li> <li>- Min. Rs.1 to 2 lakhs</li> <li>- While RTGS/NEFT require IFSC code so can be offered only by BANKS, but IMPS can be offered by Banks as well as Prepaid Payment Instruments (PPI) / mobile-wallet companies such as Phonepe, Mobikwik etc.</li> <li>- Service fee + GST applicable</li> </ul>	<b>Clearing Services:</b> <ul style="list-style-type: none"> <li>- RBI's National Electronic Clearing Service (<b>ECS</b>) &amp; NPCi's National Automated Clearing House (<b>NACH</b>) for</li> <li>- Monthly utility bills, salaries, premiums etc. automatically paid from bank account.</li> </ul> <b>Card payment Gateways:</b> <ul style="list-style-type: none"> <li>- Mastercard, Visa card, NPCi's Rupay etc. They're not free. MDR charges applicable.</li> </ul>



## 1.5.2 Interoperability Problem (इंटरोऑपरेबिलिटी)



- **(Definition)** Interoperability is the ability of customers to transact across commercially and technically independent payment platforms.
- Legal complications under Payment & settlement system act 2007, so, we don't have full interoperability; we can't transfer money between one wallet to another, can't use wallet to pay all type of taxes, fees, insurance premiums etc.
- This is an obstacle to 'cashless-economy'. So, 2018-October, RBI issued guidelines for interoperability with KYC check, customer grievances mechanism etc.

## 1.5.3 What is NPCi?

\_\_\_\_\_ is a "Not for Profit Company" 10 promoter banks with 100 crore capital to provide cost-effective payment solutions for banks (in 2008).

Table 4: NPCi has built following mechanisms / platforms / systems / apps:

<b>AEPS</b>	<ul style="list-style-type: none"> <li>- Aadhar enabled payment system. Useful for Direct Benefit Transfer (DBT) into beneficiary's account for MNREGA wages, LPG subsidy, scholarship etc. It's also required for Bankmitra-MicroATM system.</li> <li>- 2017: IDFC Bank launched the IDFC Aadhaar Pay app- India's first Aadhaar-linked cashless merchant solution. Customer simply gives Aadhar number, merchant takes his thumbprint on mobile app, money transaction completed without any MDR charges.</li> </ul>
<b>BBPS</b>	Bharat Bill Payment system for automated monthly payments of utility bills
<b>NACH</b>	National Automated Clearing House for bulk monthly payments of utility bills, dividends, salaries, pension / insurance premiums etc.
<b>NFS</b>	National Financial switch runs the ATM network, IMPS, UPI and BHIM
<b>CTS</b>	Cheque Truncation System (2010) learned in previous section 1.4.
<b>UPI 1.0 (2016)</b>	<p><b>Full Form:</b> It's a technology for building digital payment apps based on IMPS with following features:</p> <ul style="list-style-type: none"> <li>- QR Scan &amp; Pay to merchants.</li> <li>- You can link Current Account (CA) Savings Account (SA) for direct transfer of money without storing in 'wallet' first. (unlike PayTM)</li> <li>- Such app can have Push transaction (e.g. Remittance to family), Pull Transaction (e.g. monthly bill deduction by DTH) or even Bill sharing among friends.</li> <li>- Examples of UPI based app: SBI's SBIBuddy, Axis Bank's AxisPay and NPCi's own BHIM.</li> </ul>
<b>UPI 2.0 (2018 Aug)</b>	<p>Upgraded version with following features:</p> <ul style="list-style-type: none"> <li>- Overdraft Account linked [until now only CA,SA]</li> <li>- Cash on Delivery, User mandate for future date e.g. DTH / Gym.</li> <li>- Invoice in the inbox. QR authenticity – whether merchant verified or not?</li> </ul>



<b>BHIM (2016)</b>	<b>Full form:</b> <ul style="list-style-type: none"> <li>- It works on android, iOS/Apple mobile phones as an APP, and even on non-smart (basic) phones using *99# USSD- Unstructured Supplementary Service Data.</li> <li>- Bank to bank / peer to peer transaction using mobile phone (xyz@upi). No need to install multiple apps for each bank account (SBIBuddy, AxisPay etc) just one BHIM app to use all such bank accounts. App has 3 factor authentication system.</li> <li>- Your money stays in bank account and earns interest. It's not stored in 'wallet outside bank', like PayTM. No cards involved so no MDR or such hidden charges.</li> <li>- Sweden has "Swish" app to make their country 100% cashless by 2020.</li> </ul>
<b>BharatQR (2016)</b>	While PayTM QR code will not work with Phonepe app (interoperability issue), the BharatQR Quick Response code works with all UPI based bank apps and BHIM app.
<b>RuPay (2016)</b>	<ul style="list-style-type: none"> <li>- Rupee + Payment = RuPay card is world's 7th payment gateway similar to Mastercard, Visa, China's Union Pay- but at less service charges.</li> <li>- Works in 3 channels: ATM, PoS, Online. Used by banks, railway and even dairies. RuPay debit card comes free with PMJDY (Jan Dhan) account.</li> </ul>

#### 1.5.4 Types of Cards

1. **Magnetic Card:** 60s technology. Data on magnetic strip. Data can be duplicated, cloned, skimmed while swiping the card = fraud. So, RBI stopped such cards from 1/1/2019 using powers from Payment & Settlement Act.
2. **EMV card:** Full form: \_\_\_\_\_ chip infrastructure with encryption. RBI had ordered migration in 2013- finally effective from 1/1/2019. Two sub-types **(A) EMV-Contact:** cards must remain in Point of Sale (PoS) Terminal during transaction. **(B) EMV-contactless cards:** simply tap the card on terminal using RFID technology.

**HomeWork:** Read about RFID & NFC from Sci-Tech book

<b>Prelims-2018: Find Correct Statement(s)</b> <ol style="list-style-type: none"> <li>1. National Payments Corporation of India (NPCI) helps in promoting the financial inclusion in the country.</li> <li>2. NPCI has launched RuPay, a card payment scheme.</li> </ol> <p>Answer codes:</p> <p>(a) 1 only                      (b) 2 only</p> <p>(c) Both 1 and 2              (d) Neither 1 nor 2</p>	<b>Prelims-2018: Find Correct Statement(s)</b> <ol style="list-style-type: none"> <li>1. BHIM app allows the user to transfer money to anyone with a UPI-enabled bank account.</li> <li>2. While a chip-pin debit card has four factors of authentication, BHIM app has only two factors of authentication.</li> </ol> <p>Answer codes:</p> <p>(a) 1 only                      (b) 2 only</p> <p>(c) Both 1 and 2              (d) Neither 1 nor 2</p>
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#### 1.5.5 Types of ATMs: Full form \_\_\_\_\_

<b>Bank label</b>	bank itself runs the network
<b>Brown label</b>	
<b>White label</b>	
<b>Micro-ATM</b>	Bankmitra manually makes entries of deposit and withdrawal for customer. He uses handheld device for using card & Aadhar biometrics. NPCI's AEPS technology gives backend support.





### 1.5.6 What is Payment Regulatory Board (PRB)?

- 1998: Banking Reforms / Narsimhan-II Committee suggested regulatory framework for e-banking, card payment etc.
- 2007: Payment & Settlement Systems Act -> RBI -> Board for Regulation and Supervision of Payment and Settlement Systems. (BPSS). All Payment system providers have to register with RBI's BPSS- Whether bank, non-bank, wallet-PPI etc.
- 2016: Ratan Watal Committee on digital payment suggested replacing this BPSS with a Payments Regulatory Board (PRB) in RBI, to look after Interoperability, Consumer protection, Innovation, R&D in digital payments.
- 2017-Budget accepted Ratan Watal proposal. 2018: draft Payment and Settlement System Bill to implement it.
- But, RBI vs Government difference of opinion about who should be chairman, how many members from Government side etc. <Blank space for update in future>

### 1.5.7 MDR: Full form: \_\_\_\_\_

- MDR is the fee that a merchant must pay to a bank for every credit / debit card transaction. MDR hurts merchants' profit margin, discourages them from adopting PoS terminals, digital payment system.
- 2017-18: RBI put ceilings on MDR fees to encourage digital economy.
- WEF 1/1/18: Ministry of \_\_\_\_\_ started MDR-subsidy on payments made via Debit card, BHIM or Aadhar enabled payment system for bills upto Rs.2,000. Scheme valid for 2 years. **Direct benefit:** Encourage digital payments ecosystem. **Indirect Hidden benefit:** \_\_\_\_\_

#### 1.5.7.1 Notable measures to promote cashless economy Post-demonetization






- **During 2016-17:**
  - o **Ratan Watal** Committee to Finance Ministry for medium term recommendations to strengthen digital payment ecosystem.
  - o **Chandrababu Naidu** chief ministers' Committee to PM to promote digital payment.
  - o HRD ministry's **Vittiya Saksharta Abhiyan** wherein college students explain people about digital transactions.
  - o NITI+NPCi launched lottery / cashback schemes for customers (**Lucky Grahak**) and merchants (**Digi Dhan Vyapar**). Government itself launched further referral bonus, cashback schemes.
- **Budget-2017:** imposed ceilings the cash transactions, provided depreciation / deduction incentives to companies for using digital transactions, reduced custom duties on ATM related devices.
- **Budget-2018:** promised to explore blockchain technology [of cryptocurrencies] for promoting digital economy.
- <Blank space for update more initiatives in future>



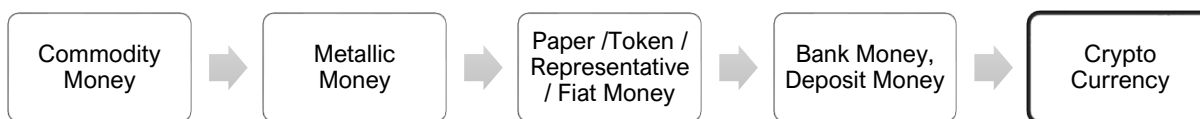
**Q. Mains GSM3:** Explain these two terms with respect to 'less cash economy' (1) MDR (2) Interoperability. (150 words, 10 marks) 'कम नगदी वाले अर्थतंत्र' के परिपेक्ष्य में इन दो शब्दों को समझाइए: (1) एमडीआर (2) इंटरऑपरेबिलिटी (3) ब्लॉकचेन टेक्नोलॉजी.

### 1.5.7.2 Essay: Cashless Economy- Charms and Challenges

- **(Definition)** A cashless economy is an economy where financial transactions are not conducted with money in the form of physical banknotes or coins, but rather through electronic methods such as \_ \_ \_ <insert examples>.
- **(Origin)** In ancient times, people used to trade with each other using barter system. But its limitations \_ \_ \_ \_ <give evolution story>.

Stakeholder	Body: Charms	Body: Challenges
 <b>RBI</b>  <b>Shanti Kanta Das</b>	<ul style="list-style-type: none"> <li>- Saves cost of printing new currency (Rs.27 billion a year) – environment,</li> <li>- Better efficacy of monetary policy updates, NPA/fraud surveillance.</li> </ul>	<ul style="list-style-type: none"> <li>- MDR, Interoperability, Fintech companies evolving more rapidly than legal framework.</li> <li>- KYC: Aadhar vs privacy debate</li> </ul>
 <b>Govt.</b>	<ul style="list-style-type: none"> <li>- Better tax surveillance, checks on fake counterfeit currency terror finance, targeted delivery of agri-loans and subsidies/ DBT: Annually Rs. 1 lakh crore saved.</li> <li>- Can save farmers from moneylenders, and poor families from Ponzi schemes.</li> </ul>	<ul style="list-style-type: none"> <li>- Power, telecom infrastructure not available everywhere.</li> <li>- Government itself must become a role model first in handling tax, tender, tolls, procurements through digital payment.</li> <li>- To encourage digital payment if subsidy, tax breaks, lotteries given for perpetual time -&gt; fiscal deficit.</li> <li>- Post-Demonetization, digital transactions ↑ but then again ↓ so, punitive measures = 😞</li> </ul>
 <b>Household</b>	Secure, difficult to steal, time, convenience, financial inclusion.	<ul style="list-style-type: none"> <li>- Digital divide, Low financial literacy- notion of security associated with holding physical currency.</li> <li>- Frauds, Card cloning, service fees on NEFT / card payments.</li> </ul>
 <b>Businessman</b>	homework	homework

**Conclusion:** Digital payment is not a panacea, nor is cash all bad. For a developing country like India, "Less cash" economy better than "Cashless" economy.



## 1.6 CRYPTO-CURRENCY & BLOCKCHAIN TECHNOLOGY

- **[Definition] Cryptocurrency:**
- **[Definition] Blockchain:** A secured decentralized database that maintains a continuously growing list of records / transactions. Old entries can't be deleted, new entries will be visible to all. Mainly used for running cryptocurrency network.
- **[Origin]** Anarchist groups lost faith in **FIAT MONEY / LEGAL TENDERS** because Subprime Crisis (2007) eroded the purchasing power of US Dollar. They also dislike **BANK MONEY / DEPOSIT MONEY** because of transaction charges on e-banking, card payments, MDR, interoperability issues.
- **2009:** An anonymous user Satoshi Nakamoto launched a cryptocurrency 'Bitcoin', total 21 million coins, wherein 1 Bitcoin (BTC) = \_\_\_\_\_
- Ethereum, Litecoin, Digicoins, Laxmicoin, Ripple etc. are also cryptocurrencies.

3 ways to obtain Cryptocurrency	Negative Points / Challenges
1)	<ul style="list-style-type: none"><li>- Graphics cards demand &amp; price hike: 2x-4x times due to bitcoin mania. E-waste generation. Thermal Electricity wastage worth 20 megatone CO<sub>2</sub></li><li>- If quantum computer invented it'll solve it in seconds, thus crashing the value of Bitcoins.</li></ul>
2)	<ul style="list-style-type: none"><li>- Bitcoin wallets have "public address" (like an email) &amp; private key (like a password): but not traceable unlike an email. So, Narcotics, illegal trade, Terror finance.</li><li>- Selling goods/services in exchange of bitcoins = Government deprived of GST, Custom duty, Income tax on merchant's profit.</li><li>- Scam: can't get justice under Consumer Protection Act.</li></ul>
3)	<ul style="list-style-type: none"><li>- For traditional Rupee to dollar exchange, Forex dealers have to register with RBI under FEMA Act. They're monitored with KYC, PMLA, Enforcement Directorate.</li><li>- If rupee or \$ exchanged with Bitcoin = terror finance, sending black money to tax havens.</li><li>- Dollar to Bitcoin exchange rate: speculation, volatility, Government deprived of Capital Gains Tax (CGT)</li><li>- Ponzy investment frauds- hence Government came up with Banning of Unregulated Deposit Schemes Bill, 2018. Read on PRSIndia once bill is passed.</li></ul>

### MCQ. Find correct statement(s) about Bitcoin? [UPSC-CDS-2017-I]

1. It is a decentralized virtual currency.
2. It is generated through complex computer software systems.
3. The Reserve Bank of India recognized it as a legal tender in January 2016.




Answer Codes

- (a) 1 only (b) 1 and 2 only  
(c) 2 and 3 only (d) 1, 2 and 3



### 1.6.1 Cryptocurrency legality in India & elsewhere

India is neither the first nor the only country to restrict cryptocurrencies. Nepal, Bangladesh, Morocco, Algeria, Equator, Bolivia et al already banned it.

 Shanti Kanta Das	<ul style="list-style-type: none"> <li>- Since 2013, RBI had been warning people. 2018: RBI directed all banks/PPP/mobile-wallet cos. to stop relations with any Cryptocurrency company.</li> <li>- However, RBI's Institute for Development and Research in Banking Technology (IDRBT)- studying how to use blockchain technology for promoting digital economy.</li> </ul>
	<ul style="list-style-type: none"> <li>- <b>2017: Dinesh Sharma</b> Committee to FinMin suggested total ban on cryptocurrencies. But activists challenged in SC. So Government sets up new Committee. <b>Subhash Chandra Garg</b> committee to FinMin has been working on Draft law &amp; framework for cryptocurrencies. Both Dinesh &amp; Subhash were Secretary in Department of Economic Affairs.</li> <li>- <b>2018:</b> Budget says Crypto-currencies are not legal tenders. We'll eliminate use of these crypto-currencies in financing illegitimate activities or as part of the payment systems.</li> </ul>
World Bank	<ul style="list-style-type: none"> <li>- 2018-Aug: World Bank launched World's first blockchain bond called "_____ " in Australia -&gt; public invests, gets ~2% interest after 2 years. This money is loaned to developing countries.</li> <li>- Blockchain bond requires less cost in server / database /paperwork maintenance unlike traditional bonds.</li> </ul>
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	<ul style="list-style-type: none"> <li>- Bolivars have little value in _____ country due to hyperinflation, and failed economy.</li> <li>- So, President Nicholas Maduro launched "Petro"- a fiat cryptocurrency whose price is linked with market price of 1 oil barrel.</li> <li>- Can be bought using Dollar, Euro, even other cryptocurrencies. Sale began in 2018-Nov.</li> </ul>

<space for self-update>

### Mains-Answer-Writing/GSM3:

"While regulatory clearance to cryptocurrencies can open Pandora's box, the underlying blockchain technology holds panacea for various areas of governance and economy". Explain in context of India. **(250 words, 15 marks)**

क्रिप्टोकॉरन्सी को अनुमति देने से विनाश की परिस्थिति का निर्माण, जबकि अंतर्निहित ब्लॉकचेन टेक्नोलॉजी प्रशासन और अर्थव्यवस्था के विभिन्न क्षेत्र के लिए रामबाण हो सकती है."। मरुनल भारत के संदर्भ में समझाएँ.