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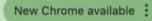














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LOGIN / REGISTRATION







SC rejects Shivakumar's

plea to dismiss CBI case

**Israel hits** Gaza as Hamas halts talks



WPI inflation rose to 3,36% in June SUSSMESS IN PAGE 43

Big brother to Brother; a Nepal-India reset The PMs must look to rebuild trust ITOMIAL II PARE I



#### INSIDE

SOUTH II PAGE 2

#### SC to look into use of Money Bills to pass laws Chief Justice Chandruchud says appeals challenging the use of Money Bills by the Centre to pass contentious amendments in Parliament will be listed when he forms

Body of sanitation worker recovered after 46 hours

Forty-six hours after a sanitation worker went miss in the Amaylahanjan Canal i the Kernie capital, his body was recovered directorant a Monday morning, a PAGE A

#### Russia set to deliver 2 stealth frigates soon

THE W. BREALING After a series of deliver due to COVID-10, the war in Library and Western sanistions, two stealth Digates in Bussia up protruction for the Indias from September is Pedit 4

#### ICAR to release 323 new varieties of 56 crops today

NEW DELIN NEW DELAS!
The Indian Coursell of Agricultural Research will announce the retexes of \$23 varieties of \$6 craps, including coroll, oldseeds, forage craps, and again same, at a furnism here on Tuesday as part of the 16th foundation day. In PAGE 8

#### **Pune Police book** controversial IAS officer's parents

The Pure Police have filed an FIR against the marker of the Puja Rhedker in a land disp case after a video showed to

Ranjan Cogot in the case of Reger Mathew vs. South In-dian Bank Ltd. The cardi-nal issue is whether such her Ornell

In Jurice of India
In J. Chandrachiad
on Monday agreed
to list petitions challenging
ley the Centre to pass contentials amendments in
the Parliament of the Parliament
Constitution Benches; the
Chief Justice addressed seention advocate Kapil 35bal,
who made and order to the
Chief Justice addressed setion advocate Kapil 35bal,
who made and order to the
Chief Justice and read the
thomas in order mentioners, including Rajvis
Satha MP jairan Hamesh.
The Money Bill quantion
judge Bench in November nal lasue is whether such amendments a could be passed as a Money Bill, cir-cumventing the Rayu Sab-ha, in violation of Article 110 of the Constitution.

The provisions A Money Bill is deemed to contain only provisions dealing with all or any of the matters under clauses (a) to (g) of Article 110(b, largely including the appropriation of money from the Consolidated Fund of In other words, a Money Bill is restricted only to the

The contentious route

The Pinance Act of 2011?

M. Ammaior Act, 2010

legal questions concerning amendments made from 2015 orwards in the Pre-vention of Money Lander-ing Act. (PMLA) through Money Bills, giving the fin-forcement Directorate alments, it left the question whether the amendments could have been passed as Money Bills to the sevenjudge bench Similarly, the case also Similarly, the case also

#### court's decision

NEW DELEM The Congress on Menday welcomed the Supreme Court agreeing to consider a submission for setting up a Automobilish for weithing up a Constitution Bench to free pleas chaldingling the validity of presings of taxes at Money Bills is equal to

alter the appearments to 19 key judicial tribunals. Mr. Ramesh, a petition-er in this case, had argued that the 2017 Act was delib-

erately categorised as a Money Bill to 'estend exec-

stitutions (tribunals) by al-tering the composition of the selection committees

the continued of the co

hill.

Bustice Chandrachud (as be was them) had delivered a dissenting optnion on the

Constitution Benches, a Money Bill is restricted only to specified financial matters; Justice Chandrachud had delivered a dissenting opinion in 2021, overruled by the majority Review Bench in 2001. The Review Benish in 2021. The two quantions befire the Beview Henish had been whether the Lok Sabha Speaker's declaion to de-clare the proposed Aad-haar law as a Money Bill was "final". The second, was "final". The second, getted Delivery of Financial and Other Subsidies, Benishen-liks and Services) Act, 2018 was correctly certified as a

questions on the Money full in the Rojer Mathew re-

#### Festive fervour

Judge Bench in November 2019 by a five-judge Bench headed by Chief Justice



#### Authorities hunt for clues as motive behind attack on Trump remains elusive +

AMBRES ON MILWAVERS

Investigators were hunting for any clues about what may have driven Thomas Matthew Crooks, the 20-year old man who tried to gear-dicate former Presi-dent Denald Trump, to car-ry out Saturday's attack. The FBI said they were investigating it as a potential act of domestic terrorism, but the absence of a clear ideological motive led con-spiracy theories to

Crooks thrut came to law saturday's rally when spec-lators noticed him acting

gators noticed thin acting arrangely outside the cam-paign event.
The tip sparked a framic search but officers were stable to find him before be managed to get on a root, where he opened fire.

Histor's address
"I urge everyone — everyone, please, don't make assumptions about his metives or his affiliations," President joe Biden said in remarks on Sunday from the White Company of the Company the White House. "Let the FBI do their job, and their partner agencies de their job. I've instructed that his investigation be the

ough and swift."
The PBI said it believes trooks, who had bomb-making matertule in the car-be drawe to the rally, acted alone. Investigators have found as threatening com-ments on social media ac-

counts or social media accounts or ideological positions that could helpexplain what led hint to furexplain what led hint to furexplain what led hint to furfice the stage of the stage of the stage of the
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Judge dismisses criminal

case against Trump

A U.S. judge on Monday dismissed the criminal case accusing Denald Trump of illegally helding unto classified discuments, dealing the former President another major logal victory as he seeks a

ers said he was in "great spirits" ahead of his arrival on Sunday in Milwaukee for the Republican National Convention.

al convention.

Two speciators were critically injured, while a former fire chief from the area, Corey Compensione was killed.

was killed.

At the Republican Porty
convention that hegan in
fully-autoe on Monday, Mr.
Trump will announce his
choice for a runting matehorize for the control of the
refer Ohio U.S. Scantor J.D.
Marco Rabio and North
Dakota Governor Boug
Ducton

return to the White House, Florida-based U.S. District Albeen Cannon, ruled that Special Counsel Jack Smith, who is leading the presentation was the pronecution, was unlawfully appointed to his role.

a lot different, a lot diffe-rent than it would have been two days ago," Mr. Trump told the Washing-ton Examiner, about the

'No place for violence' President fiden, too, in a televised address from the White House on Sunday, and "There is no place in America for this kind of violence, for any violence ever. Period. Ne exceptions. We easy allow this violence to be rearmaised." The political thetoric in this country has gotten very heared. It's

Dagota Coverno Long
Burgum.
This is a charce to
the This is a charce to
the Coverno Coverno
to Coverno Coverno
the Whole world, to
gether. The speech will be
PAGE 14

#### Imports continue to outpace growing exports; trade deficit widens by 9.4%

#### Vikas Dhoot

India's merchandise india's merchandiss ex-ports grew for the third straight menth in June, ris-ing 2.88% to \$38.2 billion. but the import bill climbed by a faster 3% to \$56.2 bildeficit by 9.4% from a year ago, as per quick trude esti-mates released by the Commerce Ministry on Monday.

Commerce Secretary Suall barthwal and that to-all merchandise and ser-vices exports have lit a re-cord high of \$200.3 tillion in the first quarter of 2024-ing the first quarter of 2024-high of \$197.1 tillion re-corded in 2022-23. While Services exports numbers for the last month will be released by the Central bank, the Ministry has pegged the number at Sunii Barthwal said that toDeficit widens Expends grow 2.5% to \$35.2 billion, but with imports thing at

23.0.2 billion, s. 19th higher than a year agio.
Noting that global growth is looking up and growth is looking up and Mr. Burthwal said that if growth inspulses unusain, India could well cross-growth inspulses unusain, India could well cross-ports this year. "So that is a good takeaway from the quarterly figures, which gives us optimism," the So-crestary sould be saided that \$30.3 billion, 8.9% higher

Total exports

the government is focusing on six key sectors and 20 countries to boost exports.

Total exports
Total exports stood at a record high of \$778.2 billion
in 2023-24, 0.42% ever the
previous year, texports will
have to rice 2.3% through
this year to hit the \$600 biltion mark, but as officials
acknowledged, there are
"many if and bute" to the

opolitical risks. This June's goods ex

Sohasini Haidar NEW DELIUMOSCOW ports and imports were the second highest in 10 years, nest only to the \$42.3 lift tion of exports and \$64.33 ndia and Russia bave dou-ded their payments in national currencies (ruper rouble) since last year de-pite sanctions by the U.S. billion of imports recorded in June 2022, Mr. Barthwa said. The major growth drivers were engineering and electronics goods, up 10.3% and 16.9%, respec-10.3% and 80.9%, respec-tively, as well as drugs and pharmaceuticals (0.3%), for (0.0 7%), the top trade official and. Worryingly, petroleum Morryingly, petroleum June to \$5.5 billion, while imports rose 19.6% to \$18.00 billion. The state of the state of the \$18.00 billion. \$18.00 billion. \$18.20 billion. \$18.20 billion in May Quan-tice Research economials and in a procession of the state o

pite annetions by the U.S. and European Urion, says Russia's state-controlled and larged lank, after and larged lank, after the property of th

India, Russia

have doubled

rupee-rouble payments'

# SC to look into use of Money Bills to pass laws

Chief Justice Chandrachud says appeals challenging the use of Money Bills by the Centre to pass contentious amendments in Parliament will be listed when he forms Constitution Benches; a Money Bill is restricted only to specified financial matters; Justice Chandrachud had delivered a dissenting opinion in 2021, overruled by the majority

The Hindu Bureau

NEW DELHI

hief Justice of India D.Y. Chandrachud on Monday agreed to list petitions challenging the Money Bill route taken by the Centre to pass contentious amendments in the Parliament.

"I will list when I form Constitution Benches," the Chief Justice addressed senior advocate Kapil Sibal, who made an oral mentioning on behalf of the petitioners, including Rajya Sabha MP Jairam Ramesh.

The Money Bill question was referred to a sevenjudge Bench in November 2019 by a five-judge Bench headed by Chief Justice Ranjan Gogoi in the case of Rojer Mathew vs. South Indian Bank Ltd. The cardinal issue is whether such amendments could be passed as a Money Bill, circumventing the Rajya Sabha, in violation of Article 110 of the Constitution.

#### The provisions

A Money Bill is deemed to contain only provisions dealing with all or any of the matters under clauses (a) to (g) of Article 110(1), largely including the appropriation of money from the Consolidated Fund of India and taxation.

In other words, a Money Bill is restricted only to the specified financial matters.

The reference includes

## The contentious route

Some of the legislations passed as Money Bills in the Parliament include:

- Amendments to the Prevention of Money Laundering Act
- The Finance Act of 2017
- Aadhaar Act, 2016



A Money Bill is a financial legislation that contains provisions exclusively related to revenue, taxation, government expenditures, and borrowing

legal questions concerning amendments made from 2015 onwards in the Prevention of Money Laundering Act (PMLA) through Money Bills, giving the Enforcement Directorate almost blanket powers of arrest, raids, etc. Though the court had upheld the legality of the PMLA amendments, it left the question whether the amendments could have been passed as Money Bills to the sevenjudge Bench.

Similarly, the case also raises questions about the

# Cong. welcomes court's decision

#### NEW DELHI

The Congress on Monday welcomed the Supreme Court agreeing to consider a submission for setting up a Constitution Bench to hear pleas challenging the validity of passage of laws as Money Bills. » PAGE 5

passage of the Finance Act of 2017 as a Money Bill to alter the appointments to 19 key judicial tribunals.

Mr. Ramesh, a petitioner in this case, had argued that the 2017 Act was deliberately categorised as a Money Bill to "extend executive control over these institutions (tribunals) by altering the composition of the selection committees and vastly downgrading the qualifications and experience required to staff these bodies".

The question of passage of laws after dressing them up as Money Bills had come up in the Aadhaar case too. However, the top court had, in a majority verdict in 2021, refused to review its 2018 judgment (K. Puttaswamy case) upholding the validity of the Aadhaar Act and its certification as a Money

Justice Chandrachud (as he was then) had delivered a dissenting opinion on the Review Bench in 2021. The two questions before the Review Bench had been whether the Lok Sabha Speaker's decision to declare the proposed Aadhaar law as a Money Bill was "final". The second, whether the Aadhaar (Targeted Delivery of Financial and Other Subsidies, Benefits and Services) Act, 2016 was correctly certified as a 'Money Bill' under Article 110(1) of the Constitution.

Justice Chandrachud, in his dissent, had said the Review Bench ought to wait till the seven-judge Bench decided the larger questions on the Money Bill in the Rojer Mathew reference. But the majority had disagreed with him.

# CRITERIA FOR BEING A MONEY BILL

### Article 110 of the Constitution defines the Money Bill

Money Bills are those Bills which contain "only" provisions dealing with all or any of the matters specified in Article 110 sub-clauses:

- Imposition, abolition, remission, alteration, regulation of any tax
- Regulation of borrowing of money or the giving of any guarantee by govt
- Custody of the Consolidated Fund or the Contingency Fund of India, the payment of moneys into or the withdrawal of moneys from any such fund

- Appropriation of moneys out of Consolidated Fund of India
- Declaring of any expense to be expenditure charged on the Consolidated Fund of India or the increasing of the amount of any such expenditure
- Receipt of money on account of Consolidated Fund of India or Public Account of India or the custody or issue of such money or the audit of the accounts of the Union or of a State

A Bill which has any provision other than money provision (as mentioned in sub-clauses) is not a Money Bill

Constitution gives power to the Lok Sabha Speaker to take a final call if any question arises whether a Bill is a Money Bill or not

Speaker's decision is final and cannot be challenged in any court of law

RS has limited powers with respect to Money Bills

Lok Sabha has supreme power in terms of Money Bills

Approval Prior approval of President or Government is required.  Certification Certified by the Speaker of the Lok Sabha.  Rajya Sabha The power of Rajya Sabha is restricted.  The power of point sitting.	BASIS FOR COMPARISON	MONEY BILL	FINANCE BILL
Introduction  Lok Sabha only.  Category A bills are introduced in Lok Sabha while Category B bills can introduced in any of the transport of the transport of President or Government is required.  Prior approval of President is required.  Certification  Certified by the Speaker of the Lok Sabha.  Rajya Sabha  The power of Rajya Sabha is restricted.  Both Lok Sabha and Rajya Sabha has equal powers.  Joint Sitting  No provision of joint sitting.  Provisions are there regarding joint sitting of	Meaning	which exclusively deals with the matters prescribed in article 110 of the	with the provisions concerning revenue and
introduced in Lok Sabha while Category B bills can introduced in any of the to houses.  Approval Prior approval of President or Government is required.  Certification Certified by the Speaker of the Lok Sabha.  Rajya Sabha The power of Rajya Sabha is restricted.  Both Lok Sabha and Rajya Sabha has equal powers.  Joint Sitting No provision of joint sitting.  Provisions are there regarding joint sitting of	Form	Government Bill	Ordinary Bill
or Government is required. is required.  Certification Certified by the Speaker of the Lok Sabha.  Rajya Sabha The power of Rajya Sabha is Both Lok Sabha and Rajya Sabha has equal powers.  Joint Sitting No provision of joint sitting. Provisions are there regarding joint sitting of	Introduction	Lok Sabha only.	introduced in Lok Sabha while Category B bills can b introduced in any of the two
the Lok Sabha.  Rajya Sabha The power of Rajya Sabha is restricted.  Both Lok Sabha and Rajya Sabha has equal powers.  Joint Sitting No provision of joint sitting. Provisions are there regarding joint sitting of	Approval		Prior approval of President is required.
restricted. Sabha has equal powers.  Joint Sitting No provision of joint sitting. Provisions are there regarding joint sitting of	Certification	and the second s	Not certified by the Speaker
regarding joint sitting of	Rajya Sabha	7	Both Lok Sabha and Rajya Sabha has equal powers.
Lok Sabila alid Kajya Sabi	Joint Sitting	No provision of joint sitting.	

# Money and Financial Bill

	Money Bills	Financial Bill (I)	Financial Bill (II)
Initiated at	Only in Lok Sabha	Only in Lok Sabh	Lok Sabha or Rajya Sabha
Introduced by	Only by a Minister	Only by a Minister	Minister
Role of Upper House	Return with or without recommendations within a maximum period of 14 days.	Can reject or amend the bill.	Can reject or amend the bill.
Role of Speaker	Authority to endorse a bill as a Money bill.	Not Applicable	Not Applicable
Purpose of the bill	Matters under Article 110	Matters under Article 110 and general legislation.	Expenditure from Consolidated Fund of India, but except matters under Art 110.
Majority required	Simple Majority	Simple Majority	Simple Majority
Role of President	Prior permission is required for introduction. President can give assent or withhold but cannot return.	Prior permission is required for introduction. Can either give or withhold assent or return the bill for reconsideration.	Prior permission is not required for introduction. Can either give or withhold assent or return the bill for reconsideration.
Deadlock	Not Applicable	Join sitting	Joint Sitting

# • Challenge to Money Bills / मनी बिलों की चुनौती

- Chief Justice of India, D.Y. Chandrachud, has agreed to list petitions challenging the use of Money Bills by the Centre to pass contentious amendments.
- भारत के मुख्य न्यायाधीश डी.वाई. चंद्रचूड़ ने विवादास्पद संशोधनों को पास करने के लिए केंद्र द्वारा मनी बिलों के उपयोग को चुनौती देने वाली याचिकाओं को सूचीबद्ध करने पर सहमति व्यक्त की है।

# • Scope of Money Bills / मनी बिलों का क्षेत्र

- A Money Bill is restricted only to specified financial matters, as defined in Article 110(1) of the Constitution.
- मनी बिल को केवल वित्तीय मामलों तक सीमित किया गया है, जैसा कि संविधान के अनुच्छेद 110(1) में परिभाषित किया गया है।
- It includes provisions related to the appropriation of money from the Consolidated Fund of India and taxation.
- इसमें भारत की संचित निधि से धन की विनियोग और कराधान से संबंधित प्रावधान शामिल हैं।

# • Contentious Use Cases / विवादास्पद उपयोग के मामले

- Examples include the Aadhaar Act, 2016, Finance Act, 2017, and amendments to the Prevention of Money Laundering Act (PMLA).
- उदाहरणों में आधार अधिनियम, 2016, वित्त अधिनियम, 2017 और मनी लॉन्ड्रिंग अधिनियम (पीएमएलए) की रोकथाम में संशोधन शामिल हैं।

- The Finance Act of 2017, categorised as a Money Bill, altered the appointments to 19 key judicial tribunals.
- 2017 के वित्त अधिनियम को मनी बिल के रूप में वर्गीकृत किया गया, जिससे 19 प्रमुख न्यायिक अधिकरणों में नियुक्तियों में बदलाव किया गया।

### • Judicial Review and Opinions / न्यायिक समीक्षा और राय

- The question of whether such amendments could be passed as a Money Bill was referred to a seven-judge Bench in 2019.
- क्या ऐसे संशोधन मनी बिल के रूप में पारित किए जा सकते हैं, इस सवाल को 2019 में सात-न्यायाधीशों की पीठ को भेजा गया था।

- 1. Justice Chandrachud had delivered a dissenting opinion on the validity of the Aadhaar Act as a Money Bill in 2021.
- 2. न्यायमूर्ति चंद्रचूड़ ने 2021 में आधार अधिनियम की वैधता पर मनी बिल के रूप में असहमति व्यक्त की थी।

- Consider the following statements regarding Money Bills in India:
- 1. A Money Bill can include provisions dealing with all or any of the matters listed under clauses (a) to (g) of Article 110(1).
- 2. The Finance Act of 2017, passed as a Money Bill, involved amendments to 19 key judicial tribunals.
- 3. The decision to declare a Bill as a Money Bill is final and cannot be challenged in the Supreme Court.
- Which of the above statements is/are correct?
- a) 1 and 2 only
  - b) 2 and 3 only
  - c) 1 only
  - d) 1, 2, and 3

#### **India and Russia have doubled** rupee-rouble payments in 2024'

According to figures shared by Russia's state-controlled Sherbank, the number of transactions has also increased; despite Western sanctions, businessmen push for Indian manufacturers to look towards Moscow and counter China's inroads

#### Subasini Haidar

doubled their pay-(rupee-rouble) since last year despite annetions by the U.S. and annections by the U.S. and stroppen Union, says Rus-ing Committee and Committee and the Committee and Committee and the Committee and Committee and possible and Committee and Committee have also instrumed multi-position by include or provides have also instrumed multi-mary have 2024, the vol-cessed doubled from the cessed doubled from the particular of the Committee and Committee and particular and Committee and Committee and particular and Committee and Committee and particular and Committee and Committee and Committee and particular and Committee and Committee and Committee and particular and Committee an

amount, and the number of transactions Sherbank handled increased by 80%

in the first half of 2024.
While Sherbank has operated branches in India
since 2010, sanctions were since 2010, satisfions were imposed by the U.5. in the minediate aftermath of Russia's invasion of Uk-raine in February 2022, and then by the European

Moscow last week, economists and Indian businessmen working in Russia hope, warning that in the absence of the Indian rupec. Chinese businesses and the year would conti-nue to benefit from the "vacuum" created by the

mus to benefit from the "wecum" created by the est of Western comparises. "We are witnessing as increase in trust towards the rapes from our clients. Today, not only have ru-per-demonstrated current accounts become a reality. but also rupes deposits, which businesses are showing great interest is. Since the beginning of the year, the volume of corpo-rate deposits in rupees has increased sixfold," a Sherincreased sisfold," a Step-bank apolesperson told. The Hindu in response to apsertes about priential growth areas, adding that the rapes is now "easily convertible" in Russia, and that "shorbank hopes to serve as a "diserpa" for more businesses given the



\$100 billion tende target by 2020 set by Mr. Modi and Russian President Vladimir Parin during talks. "Prime Minister Modi's journey to Moscow was ve-ry important because it

was the first visit at a time when economic coopera-tion between the two tion between the two countries has come to a qualitatively new level," and Lyria Kuith, Head of India Studies at the SECL KOVO Institute for Energ-ing Market Studies, at Man-cow School of Management, "Socure parties ment mechanisms, into rance and logistics are among the most important areas to focus on," she added, listing auto and avia-tion components, chemi-cals, microelectronics, consumer electronics, machinery, medical devices and agricultural products as sectors in which Indian

companies should consider exporting to Russia.

According to a growing number of Indian basis should come and vento into the market, th member of Indian busi-iessenen new based in Ruesia, the generament must move quickly as Chi-na has taken more advan-tage of the sanctions to fill mio the market, they should fill up the Russian market with Indian pro-ducts for which there is a vacuum in the region," he said.

more evenly balanced. At present, even Indian com-panies are being forced to onsider payments in the Chinese yuan, they say.
"I think sanctions have

"I think sanctions have created new opportuni-ties, and thins has gained a bit compared in India, Of ment has been very posi-five about firatle with Rus-sia), but sometieve II has not been achieved on the same male as China," as-pressing hard. I heart Petersburg-based board member of a joint venture between International Institute for Advanced Acrospace Technologies (HAAT) and Indian firm Millenni-um Aerodynamics that produces "hybrid sero-boats", "Indian businesses

they

#### T.N. govt. to hold all-party meet on Cauvery dispute

The Hindu Bureau

Famil Nashr Chief Minister Tamil Nash Chief Minister M.K. Stalin on Monday condemned the Karnataka government for not releas-ing water in the Cauvery, she to the State of Tamil Nadu. He has also called for an all-party degislative meeting at the Xecretaria to the Cauvery of the to fecide on future course of

action. The Turnil Nadu government has also written to cauvery Water Manage-ment Authority (CWMA) Water Management Authority (CWMA) directive of the Gauvery Water Regulatory Commit the Gauvery in Turni Nada, Mr. Stalin said, the burther Mr. Stalin said, the burther of Karnataka amount-tied to "contropt" of the di-rection of the Supreme Court.

Condemnable act

"Karnataka refusing to re-lease Tamil Nadu's share of water is strongly conden-nable. The Tarnii Nada go-vernment, under no cir-



ing to Karnataka's stand that it would not release water due to Tamil Nadu, despite a direction by the CWRC

Tamil Nadu Minister for Tamil Nash Minister for Water Resources Durainu-rugan would chair the all-party (these represented in the TN legislature) meet-ing on the Secretarial cam-pus in Chemiai at 11 a.m. on July 16 to discuss the fu-

on July 16 to discuise the fu-ture course of action, Mr. would also get imputs from legal experts on the issue. A second of the course of the course of the course of the reservoirs of Karnatuka stood at 75.566 erm., Mr. further cited reports of the helia Meteorological De-traction of the course of the helia Meteorological Po-ternature of the course of the helia discovering the course of the course of the course of the helia discovering the course of the course of the helia discovering the helia discovering the course of the helia discovering the course of the course of the helia discovering the course of the course of the course of the helia discovering the course of the course of the course of the helia discovering the course of the course of the course of the helia discovering the course of the course of the course of the helia discovering the course of the course of the course of the helia discovering the course of the course of the course of the course of the helia discovering the course of the course of the course of the course of the helia discoveri

According to informa-tion reaching Chemial, Bi-ligundla, even at 4 p.m., recorded only around 4,000 cubic feet per se-cond. As it is expected to take two to two-and-a-half days for water released from Kahimi or Krishnara la Sagara to get realised s the inter-state border point, officials my that there may be an improve ment in the flow in the

must in the flow in the coming days.

As on July II, Tamil Na-dia realized about 2.8 thousand million cubic feet (me f) this month. Since june I, the total real-

#### Delhi Police submit chargesheet in 2023 security breach case

#### Press Trust of India

day filed a supplementary chargesbeet before a court here in connection with the Parliament security breach last year on the an-nivenary of the 2001 ter-ror stuck.

The police filed the chargesheet before Addi-

chargesileet before Addi-tional Seasions Indge Hur-deep Kaur after obtaining the requisite sanctions to the requisite sanctions to under the stringent Union will Activate Organization Act (LAPA). The original Color of the June 1 of the Color of the June 2 of

accused persons till the

Special Public Prosecu-

Judge listed the matter for argument on cognisance

tain forensic reports are awaited, and will be submitted very soon.

Earlier on June 7, the police filed an approxi-

mately 1,000-page char-geshest against all six ar-rested persons Manceanian D., Lalis Bu, Arnol Shinde, Nalbesh Ku, thawat, Sagar Sharma, and

Neelam Avad. In a major security breach on the anniversary of the 2001 Parliament terror attack, two persons jumped into the Lok Sabha chamber from the public gallery during Zero Hour, released yellow gas from cantiters and shouted sto-

After a series of delays, two stealth frigates under con-struction in masta for the Indian Navy are set to be delivered from September. denvered from appendings, Construction and deliver-ies were delayed due to COVID-19, the war in the raine and Western swections. "First ship Tustal is rea-

dy for acceptance by the Indian Navy and is sche-duled to be delivered by shaled to be delivered by September. The commiss storing crew reached Kus-sta earlier this mouth," a defence official is the know said. "The second ship Yama' is expected to be delivered by February

Agreement for frigates In October 2016, India and Russia signed an inter-go-vernmental agreement for

2025."

### Two stealth frigates being built in Russia set to be delivered soon

Marcal automorphy The leave of

### soboremexport of Rossis for material, design and specialist assistance to lo-ference of the second of the frigates, and in January 2019, the contract was signed between the Indian Defence Ministry and the GSL. All the ships are po-wered by engines from So-wered by engines from So-wered by engines from Sorya-Mashproekt Ukraine

Schedule to be followed As per schedule, the GSL is acheduled to deliver the first ship in 2028 and the first slap in 2028 and the second one als mentle la-ter. "Construction at GRI is progressing and the lumph of the first ship would take place in the next couple of months," a defence source said. The basic structures of two figures in busin of two frigates in Russia were lying at the Yantar shippard in Russia which are now being finished. The Indian Navy already operates six of these fri-

#### Vikram Misri takes over as India's 35th Foreign Secretary

#### Kallel Bhattacheriee

Vikram Misri, a 1989-batch officer of the Indian Fo-reign Service, took charge as the 33th Foreign Secre-

tary on Monday. Mr. Misri, who served as a Deputy National Security Adviser before the current assignment, served in Chi-na during the 2020 Galwan suffict and is also known have extensive contact conflict forn. Myanma

in conflict-torn Myanmar where he served as India's Ambassador from 2016 to 2016. He has taken over from Vinay Mohan kwatra. The 1964-born diplomat has served in multiple the dian missions in locations such as troopeds. Their, he such as Brussels, Tunis, Is lamabad, Washington DC, Munich and the Sri Lankan capital Colombo where he was Deputy High Commis-atmer of India, He served



to the corresp circum In the current stream stances, Mr. Minrt will be expected to provide policy directives to the Govern-ment of India in dealing with the dynamics general-ed by the larael-Palestine crists, the continuing war in Ukraine and the upcom-ing U.S. election.

Secretary Vikram Mieri a he assumes his new res possibility today. Wist penisibility today. Wish him a productive and suc-cessful tenure." External Affairs Minister 8. Jaishan

#### Existing structure at M.P.'s Bhojshala complex was built using remains of temple: ASI

outside the Bhajahala Tomple

#### Ishita Mishra Mehul Malpani

The existing structure at the Bhophala complex in Dhar district of Madhya Pradeah was constructed using the remains of a tem-ple that existed earlier at the site, said the Archaeological Survey of India (ASD in its scientific survey report, which was submit-ted to the Indore Bench of the Madhya Prudesh High Court on Monday. The court had in March

Bhojshala Temple-Kamal Maula Mosspie complex. The ASI said that based on the survey, conducted over a period of three months using technologies

ing rudar and from archae-ological remains studied during the investigation the pre-existing structure "can be dated to the Paramara (dynasty) period".
"Art and architecture of the pillars and pilasters in colonnades suggest that they were originally part of a temple. For their reuse in the existing structure, fisuch as ground-penetrat-

### gures of deities and his

pures of deflies and himmer carved on them were multilated," the ARI report, a copy of which is with The Hintih, stated.

The antwested on the man and the consorts, Maralimha, thateas and other human and animal figures in the existing structure. "An human and animal figures in the existing structure." An human and animal figures is the existing structure. permitted in mosque, at many places, such images

many places, such linages have been chiselled out or defensed...; the ASI naist. The ASI report also said that inscriptions in San-found at the site. The re-port quested an inscription on the gateway to the tomb-of Abdullah shah Changai at Diar which had said that the temple "was violently converted" was violently converted" into a monque.

#### YSR Cong. leaders looted resources of A.P., says Naidu

#### M. Sambasiva Rao

Molum Reddy.
Mr. Naido alleged that
the VSRCP leaders had first The land, sand, mines, relineals and forest re-ources authered diagal ex-ources authered diagal ex-rupt practices of the previous government with an intent to benefit the YSR Congress Party fondors in the lant five years, alleged Chief Minister N. Chandra-babu, Naddu, the was releas-ing the fourth White Paper, in a series of seven, at a press conference held at Secretariat, Velagapudi, in Guntur district on Monday. Guntur district on Moroday,
Mr. Naidu said in the
White Paper on 'Natural
resources, land, mines &
minerals and forces resources' that 1.78 lakin
acres of land worth £18,576
crors were grabbed during
the terrure of the former
Chief Minerey 78, Jagan

the VSRCP leaders had first purchased a small piece of land at a lighter price and then fixed that cost as mar-less price increasing the land value at the housing colonies. The value of the allocated land to the VSRCP offices access the land value of the state was estimated. State was estimated at \$300 crore, and all the offices were being esta-blished by violating the rules, Mr. Naidu added. The cost of the assignment lands given to the ineligible persons was estimated at 11,300 crore, and the ille-II,200 crore, and the ille-gal freebolding of the rights of assigned lands was estimated at 14,821 crore. Dotted lands worth about 61,100 crore were il-legally made Treshold to benefit the VNRCP suppor-tors across the State, Mr. Notice allegad.

# Kedarnath temple in Delhi

Priests in Uttarakhand

#### Ishita Mishra

The Bharatiya Janata Party known as Trephoomi fland of the gods), is up in arms against the construc-tion of a temple in Delhi symbolically in the name of the Kedarnath temple the foundation stone of which was laid by Chief Mi

ont last week.
As a time when the State At a time when the state is gearing for an Assembly byelection in Kedarnath, the ire of the priests, who are at the heart of the State's religious tourism sconomy, may prove costly for the BBP.



miffed over construction of

Brijash Sati, the spokes-person of the Utterskhand Char Dham Teerth Punshii Maha Panchayat, teld The Maine Panchayat, told The Hinde that the prises com-munity is angry that the name of Kectarnath is being misused for monetary gains. "We don't have a problem in making shiva temples. But they cames replicate Redarnath. If this is allowed, it will create tees." Mr. Satt said, adding that priests across the four temples in the State were

"fyothing ha sthaan ek hee hat... mandir anek sthaano par bane hat ta ivotirlinga cannot be repli-cated ... temples can be

on Monday. Alayendra Alay, pres Ajayendra Ajay, president of the Badri-Kedar Temple Committee, and that legal advice was being sought. He also said that action would be taken against these who "mis-used" the name or photo of the Badricath and Ke-darnath temples.

# Two stealth frigates being built in Russia set to be delivered soon

#### Dinakar Peri

NEW DELHI

After a series of delays, two stealth frigates under construction in Russia for the Indian Navy are set to be delivered from September. Construction and deliveries were delayed due to COVID-19, the war in Ukraine and Western sanctions.

"First ship *Tushil* is ready for acceptance by the Indian Navy and is scheduled to be delivered by September. The commissioning crew reached Russia earlier this month," a defence official in the know said. "The second ship *Tamal* is expected to be delivered by February 2025."

#### Agreement for frigates

In October 2016, India and Russia signed an inter-governmental agreement for the four stealth frigates, two directly imported and



Naval advances: The basic structures of two frigates in Russia were lying at the Yantar shipyard in Russia. PIB

two to be manufactured by Goa Shipyard Ltd. (GSL).

A \$1-billion deal was subsequently signed for the two frigates under direct purchase. In November 2018, the GSL signed a \$500-million deal with Rosoboronexport of Russia for material, design and specialist assistance to locally manufacture the two frigates, and in January 2019, the contract was signed between the Indian Defence Ministry and the GSL. All the ships are powered by engines from Zorya-Mashproekt of Ukraine.

#### Schedule to be followed

As per schedule, the GSL is scheduled to deliver the first ship in 2026 and the second one six months later. "Construction at GSL is progressing and the launch of the first ship would take place in the next couple of months," a defence source said. The basic structures of two frigates in Russia were lying at the Yantar shipyard in Russia which are now being finished. The Indian Navy already operates six of these frigates weighing around 4,000 tonnes each.

- Stealth frigate Vindhyagiri is the sixth vessel rolled out as part of the Project 17A Frigate.
- The five other ships <u>INS Nilgiri, Udaygiri, Himgiri,</u>
   <u>Taragiri, and Dunagiri</u> were launched between 2019 and 2022.

#### Features

- The P17A ships are guided missile frigates.
- They are 149 metres long, with a displacement of approximately 6,670 tonnes and a speed of 28 knots.
- These ships are capable of neutralising threats in all three dimensions of air, surface and sub-surface.

•

**Project 17 Alpha frigates** (P-17A) were launched by the Indian Navy in 2019.

Project 17A Frigates are the follow-on class of the Project 17
 (Shivalik Class) Frigates, with improved stealth features,
 advanced weapons and sensors and platform management
 systems.

The project was launched by the defence forces of India to construct a series of stealth guided-missile frigates.

These frigates are currently being constructed by two companies - Mazagon Dock Shipbuilders (MDL) and Garden Reach Shipbuilders & Engineers (GRSE).

# • Delivery Schedule / डिलीवरी शेड्यूल

- Two stealth frigates under construction in Russia for the Indian Navy are set to be delivered from September.
- भारतीय नौसेना के लिए रूस में निर्माणाधीन दो स्टील्थ फ्रिगेट्स को सितंबर से डिलीवर किया जाएगा।

- The first ship, Tushil, is ready for acceptance by the Indian Navy and is scheduled to be delivered by September.
- पहला जहाज, तुशील, भारतीय नौसेना द्वारा स्वीकृति के लिए तैयार है और इसे सितंबर तक डिलीवर किया जाएगा।
- The second ship, Tamal, is expected to be delivered by February 2025.
- दूसरा जहाज, तमाल, फरवरी 2025 तक डिलीवर किए जाने की उम्मीद है।

# • Construction Delays / निर्माण में देरी

- Construction and deliveries were delayed due to COVID-19, the war in Ukraine, and Western sanctions.
- निर्माण और डिलीवरी में COVID-19, यूक्रेन युद्ध और पश्चिमी प्रतिबंधों के कारण देरी हुई।

## • Agreement for Frigates / फ्रिगेट्स के लिए समझौता

- In October 2016, India and Russia signed an inter-governmental agreement for four stealth frigates.
- अक्टूबर 2016 में, भारत और रूस ने चार स्टील्थ फ्रिगेट्स के लिए एक अंतर-सरकारी समझौते पर हस्ताक्षर किए।

- Two frigates were to be manufactured by Goa Shipyard Ltd. (GSL).
- दो फ्रिगेट्स का निर्माण गोवा शिपयार्ड लिमिटेड (जीएसएल) द्वारा किया जाना था।
- A \$1-billion deal was signed for the two frigates under direct purchase in January 2019.
- जनवरी 2019 में दो फ्रिगेट्स की सीधी खरीद के लिए \$1 बिलियन का सौदा हुआ।

### 1.Construction Progress / निर्माण की प्रगति

- 1. Construction at GSL is progressing, and the launch of the first ship is expected in the next couple of months.
- 2. जीएसएल में निर्माण प्रगति पर है, और पहले जहाज का प्रक्षेपण अगले कुछ महीनों में होने की उम्मीद है।
- 3. The Indian Navy already operates six of these frigates weighing around 4,000 tonnes each.
- 4. भारतीय नौसेना पहले से ही लगभग 4,000 टन वजन वाले इन फ्रिगेट्स में से छह का संचालन करती है।

- Consider the following statements regarding the stealth frigates being built in Russia for the Indian Navy:
- 1. The first ship, Tushil, is scheduled to be delivered by September 2023.
- 2. The construction of these frigates was delayed due to the COVID-19 pandemic and the war in Ukraine.
- 3. The agreement for the frigates was signed between India and Russia in October 2019.
- Which of the above statements is/are correct?
- a) 1 and 2 only
  - b) 2 and 3 only
  - c) 1 only
  - d) 1, 2, and 3



#### 100 years of EEG: how does it work and what is its significance?

This year marks the centenary of the first human EEG, produced by German physiologist Hans Berger, IEEG measures electrical activity in the brain generated by neurons in research, scientists use EEG for neuroscience, cognitive psychology, neurolinguistics etc.

#### Vacuderon Mukumth

he EEG is a marvel of physics and neurobsology that opens a simple window into the human train. This window is often small and yet it reveals so much. But not lead is the wonder that it reveals anythin at all without having to break open the skull first. This year is the centerary of the first human EEG, produced by German physiologist Ham Berger.

German physiologue Itam neiger.

How were the EKG invented?

Barger's feat was preceded by
incremental bur significant advances
incremental bur significant advances
reparted evidence of electrical activity in
the brains of monkeys and rabbits. Fifteen
whether of the activity in the
brains of monkeys and rabbits. Fifteen
evidence of hactuating activity in the
brains of dops and rabbits when he
atimates of their seniors. In 1912, Visitinis
maximalian EKG, of a dog's brain, Berger
succeeded him in 1924 with the human
executerpart, the is also realized with
him considering in the insieal settings.

introducing to untity in clinical settings.

#### What is an EEG?

What is 48 EEE?

IRRE stands for electroencephalography.

Telectro' pertains to electricity.

Telectro' pertains to electricity.

Telectro' pertains to electricity.

Tencephalo' refers to the busin; and

Tencephalo' refers to the busin; and

Tencephalo' refers to the busin; and

Tencephalo' refers to the busin; perform

Various functions by moving electrically

charged patticles such as ions. The movement of these particles gives rise to electrical activity that a health worker can use an EEG test to visualise. Researchers time an EEG test to visualise, Researcher have also been able to relate data obtained from an EEG with different levels and modes of brain sellvity, and used it to distinguish reliably between

normal and abnormal states.

EEG is not an uncommon diagnostic test in clinical settings. Among other applications, it is the reference standard— that is, the best test available—to diagnose epilepsy. An EESI test can also reveal the effects of anaesthesis, sleeping reveal the effects of anaesthesia, sleeping patterns, neurological activity during a coma, and availability of oxygen, EEG can begally recognised forms of death in India. In research, scientists use EEG for neuroscience, cognitive psychology, neurolinguistics, neuromarketing studies and to develop brain-computer interfaces.

What is volume conduction?

EEG measures electrical activity in the brain generated by rearrons. During an EEG test, a health worker will place the properties of the place of

movement of sheetrical activity through this three-dimensional volume. It also stands for the fact that the electrical stands for the tact and the electrical activity is prochaced in one place whereas the detectors that detect it are located at some distance. The raw data collected by the electrodes will first need to be the electrodes will first need to be corrected for the effects of volume conduction, and then for noise in the data arising from faulty electrodes and incidental physiological activity (such as blinking or muscle activity). A clinician finally interprets the processed data.

How does an EEG test work? The resirons that make up the human brain are constantly exchanging atoms,

molecules, proteins, etc. with their surroundings. Sometimes neurons will push loss out into the space between neurons. Since ions of the same charge repel each other, this 'motion' van push away other ions, which push away even

other tons, and so on.

When a large number of neurons start When a large number of neurons start this cascade at the sures (inte, a trelatively) big wave of electrical activity, flows through the brain. The electrodes on the souly are made if metal and truck the changes in voltage as the waves move past them, creating an electronicephalogram.

Where are the electrodes placed? You can place them anywhere, but if you're comparing notes with a sciential se want to follow clinical standards, you should follow the interestional 10-20.

lystem. In this system, the distance between

In this system, the distance between two adjacers electrode is either 19% or 20% of the total distance between two petities on the bend along which the system of the syst

What does and doesn't EEG show? What tokes and shown't EEG show? The changes in voltage recorded at the electrodes are transmitted to a computer, which was a substitute of the contract of the soltage on one sets and time growth eith another. Health werkers are typically interested it you types of data in the graph the voltage freesized in millionities for with another transmitted in millionities for a viril and the freequency of the variations (measured in herto). They will also factor in, among other things, the location of the neutrons responsible for the electrical activity recorded by the test for example, in the necessites in the allocates, the two types of cortices of the emerging active).

eretral cortex).
ERG is better than other diagnostic ERC is better than ofter diagnostic devices at trucking relatively rapid electrical activity in the brain, in the order of milliseconds. On the downside, it is biassed inwards electrical algusts generated closer to the surface of the generated closer to the surface of the surties, and significantly so towards currents generated by meuroisr desidring and against those generated by the axons, electrical activity originated within the brain, to result in some electrical dists, is also less than straightforward. Challenges, researchers have used EEG rogether with other tests, like magnetic resonance magning (MHL), and have developed sophisticated data sequilition, processing, and reconstruction methods.

Are EEGs affordable? Aside from its metrological and sliggments abilities, an EEG strup is also relatively simple and cost-effective. The equipment involved doesn't take

up much space, doesn't unit high-shergy radiation or sounds, doesn't confine puttents to small spaces (like MH), is non-invasive, and is justiable (the invasive

versien of EEG is called electrocorticography, or ECoO). Similarly, aside from its diagnostic Similarly, adde from its diagnostic downsides, acting up an RRI2 test requires time—including applying a gel on the person's bread and placing the electrodes in precise locations according to the 10-20 System—and its readings earlies affected if the person has an insich an entirely in the second of the proton has an insich an entirely in the second of the person has an insich an entirely and the second of the person has an insich an entirely and the second of the person has an insich an entirely and the second of the person has an entirely an entirely an entirely an entirely and the second of the person has an entirely an entirely an entirely an entirely and the person has an entirely an entirely an entirely an entirely and the entirely and the



#### THE DAILY QUEZ

#### U.S. presidential candidate Donald Trump survived an assassination attempt during a rally in Pennsylvania. A quiz on other leaders who have survived such attempts

#### Radbika Santhanam

#### QUESTION 1

This leader since alleged that the U.S. wanted to tapple his government. He we have first thine Minister in his country to be removed from office through a

#### CHOITEBUD

QUESTION 2
This President was shot in the narry.
1000c. The boths perestrated through a entry of his apossis and his speriacle was before gotting todged in his chest. As he was not coughing blood, he continued giving his speach. He carried the bothet with him for the rest of his life, who is he?

social be assuminated apparently kept his ministerial colleague, who later became deputy Prime Minister and Home Minister up at night. Harm these two towering Inadiers, whose rivolry and differences in style stagest an independent nation's trajectory. QUESTION 4

# QUESTION 4. This lander were giving a spreach at a military sevent when there were as a season-matter of the first the season-matter of the first the season-matter of the first the season-matter of the season-matter of

This leader's matter was the world's first woman Prints Musicke. This leader was the reservoired at least four this attempts. The feer that he this beliefe?



Four decades ago, a hetel forms meetly claimed the lives of this British Prime Minister and other ministers. Name this leader and the name of the hotel.

daily quie: 1. The place where India made its Obt debut. Ans: India made its debut in Leeds against England. The home team won by four

7. Insite has played the most numb against this beam. Anni Sri Lanke Visuali Name Ms Englishman, Ana: John Edrich Barty Birda: Semrani Gulu Caskeri Jagdish Godars Sadhan Kumar Pandaj K.N. Viswanathan



PROM THE ARCHIVES

#### Know your English

spargen its. R. Albentoy, Mysosto).

"A complete of yours ago, I threatened this at great length. I will explain it once again briefly, large jon to 'technical or specialized secret used by a particular group of second stated by a particular group of understand. A fraguist when stalking to a follow linguist might refer to the assumd-ry as a viscoless, tibilities, Industry, the sellow linguist will immediately understand what the other is trying to say, livery professional group has its own judgment of the sellow linguist will immediately ago, livery professional group has its own judgment of the sellow linguist will immediately ago, livery professional group has its own judgment of the sellow linguist will immediately ago, and a sellow linguist will be more as purpose when it is addressed to specialists as the specialist will be more secondaried vocabulary of a science, art. claus, sect. trade or profession. I here is an example. "This is not as executable, absolute machine code by the linker, CLINK, which also "Jargon (K. R. Ahency, Mysore)." code by the linker, CLINK, which also merges the user's program, with previously compiled program files (such as the Standard C function library) if necessary." While many of us may not undermand what the author is trying to undermand what the author is trying to undermand what the same of the same necessary." While many of us may not understand what the author is trying to or roundabout words or plurases this also marked by abstractness and

"Chequered career (8. S. Ray, New

Defin)"
"A chequered career is a career 'marked by periods of good and bad former. It is not uniformly good or bad. Please note the spelling of 'career.' to different from 'carrier'. Career' means 'profession or occupat Carrier' means 'a person or thing that

carries."
"Educationist (L. R. Nath, Nagpar)"
"Educationist" or "educationalist" is a
specialist in education. In American
English, "educationist" is a term of
disparagement for a stereotypically
making bearing educational theories
when the little and a stereotypically
making bearing orders and theories. wrone thannals life have contributed greatly in the writer's view v in the downfall of American education: When you write to an American educator don't tall him he is a great educationiat." Published in The Hindu on September 8, 1993.

#### Word of the day Nebulous

Synonyms: eleuty, sufrant

Usage: We reported the shall provip reduction

Pronunciation: as accommon International Phonetic

For feedback and magestions for



Inside the brain: Researchers inject gel under the electroencephalography (EEG) cap at the Technische Universitaet Muenchen (TUM) in Garching near Munich in 2014. REUTERS

# 100 years of EEG: how does it work and what is its significance?

#### Vasudevan Mukunth

he EEG is a marvel of physics and neurobiology that opens a simple window into the human brain. This window is often small and yet it reveals so much. But not least is the wonder that it reveals anything at all without having to break open the skull first. This year is the centenary of the first human EEG, produced by German physiologist Hans Berger.

#### How was the EEG invented?

Berger's feat was preceded by incremental but significant advances across Europe from the late 19th century. In 1875, British physician Richard Caton reported evidence of electrical activity in the brains of monkeys and rabbits. Fifteen years on, his Polish peer Adolf Beck found evidence of fluctuating activity in the brains of dogs and rabbits when he stimulated their senses. In 1912, Vladimir Pravdich-Neminsky produced the first mammalian EEG, of a dog's brain. Berger succeeded him in 1924 with the human counterpart. He is also credited with inventing the EEG, naming it, and introducing its utility in clinical settings.

#### What is an EEG?

EEG stands for electroencephalography. 'Electro' pertains to electricity; 'encephalo' refers to the brain; and 'graphy' is a suffix meaning to show or to represent. Neurons in the brain perform various functions by moving electrically charged particles such as ions. The movement of these particles gives rise to electrical activity that a health worker can use an EEG test to visualise. Researchers have also been able to relate data obtained from an EEG with different levels and modes of brain activity, and used it to distinguish reliably between

normal and abnormal states.

EEG is not an uncommon diagnostic test in clinical settings. Among other applications, it is the reference standard – that is, the best test available – to diagnose epilepsy. An EEG test can also reveal the effects of anaesthesia, sleeping patterns, neurological activity during a coma, and availability of oxygen. EEG can also confirm brain death, one of the two legally recognised forms of death in India.

In research, scientists use EEG for neuroscience, cognitive psychology, neurolinguistics, neuromarketing studies and to develop brain-computer interfaces.

#### What is volume conduction?

EEG measures electrical activity in the brain generated by neurons. During an EEG test, a health worker will place electrodes on your scalp. There are many layers of skin, fluid, and bone between the electrodes and the neurons. When a neuron produces electrical activity, charged particles will move through all these media before reaching the electrodes, and will be reflected, refracted, scattered, etc. en route.

Volume conduction refers to the movement of electrical activity through this three-dimensional volume. It also stands for the fact that the electrical activity is produced in one place whereas the detectors that detect it are located at some distance. The raw data collected by the electrodes will first need to be corrected for the effects of volume conduction, and then for noise in the data arising from faulty electrodes and incidental physiological activity (such as blinking or muscle activity). A clinician finally interprets the processed data.

#### How does an EEG test work?

The neurons that make up the human brain are constantly exchanging atoms,

molecules, proteins, etc. with their surroundings. Sometimes neurons will push ions out into the space between neurons. Since ions of the same charge repel each other, this 'motion' can push away other ions, which push away even other ions, and so on.

When a large number of neurons start this cascade at the same time, a (relatively) big wave of electrical activity flows through the brain. The electrodes on the scalp are made of metal and track the changes in voltage as the waves move past them, creating an electroencephalogram.

#### Where are the electrodes placed?

You can place them anywhere, but if you're comparing notes with a scientist or want to follow clinical standards, you should follow the International 10-20 System.

In this system, the distance between two adjacent electrodes is either 10% or 20% of the total distance between two points on the head along which electrodes are being placed.

Four common points of reference are the nasion (the depression between the eyes, just above the bridge of the nose) and the inion (the crest at the back of the skull) going front to back, and from tragus to tragus going side to side. (The tragus is the small flap-like projection on the outer ear; you push it in to shut your ears when there's a loud noise.)

#### What does and doesn't EEG show?

The changes in voltage recorded at the electrodes are transmitted to a computer, which plots the readings on a graph with voltage on one axis and time passed on another. Health workers are typically interested in two types of data in the graph: the voltage (measured in millionths of a volt) and the frequency of

the variations (measured in hertz). They will also factor in, among other things, the location of the neurons responsible for the electrical activity recorded by the test (for example, in the neocortex or the allocortex, the two types of cortices of the cerebral cortex).

EEG is better than other diagnostic devices at tracking relatively rapid electrical activity in the brain, in the order of milliseconds. On the downside, it is biased towards electrical signals generated closer to the surface of the cortex, and significantly so towards currents generated by neurons' dendrites and against those generated by the axons. The process to pinpoint where some electrical activity originated within the brain, to result in some electrical data, is also less than straightforward.

To overcome these and other challenges, researchers have used EEG together with other tests, like magnetic resonance imaging (MRI), and have developed sophisticated data acquisition, processing, and reconstruction methods.

#### Are EEGs affordable?

Aside from its metrological and diagnostic abilities, an EEG setup is also relatively simple and cost-effective.

The equipment involved doesn't take up much space, doesn't emit high-energy radiation or sounds, doesn't confine patients to small spaces (like MRI), is non-invasive, and is portable (the invasive version of EEG is called electrocorticography, or ECoG).

Similarly, aside from its diagnostic downsides, setting up an EEG test requires time – including applying a gel on the person's head and placing the electrodes in precise locations according to the 10-20 System – and its readings can be affected if the person has so much as thicker hair.

### Introduction to EEG

### What is EEG?

- A method to measure electrical activity in the brain.
- Used in clinical settings to diagnose epilepsy, monitor neurological activity during coma, anesthesia, and assess brain death.

### Invention of EEG:

- Richard Caton (1875): Early evidence of electrical activity in animal brains.
- Adolf Beck (late 19th century): Recorded brain activity in dogs and rabbits.
- Vladimir Pravdich-Neminsky (1912): First mammalian EEG (dog's brain).
- Hans Berger (1924): Invented the first human EEG, contributing significantly to its clinical utility.

### Volume Conduction:

- Refers to the movement of electrical activity through the brain's three-dimensional structure.
- During EEG tests, electrodes placed on the scalp detect electrical activity generated by neurons.
- Collected data is processed to correct for volume conduction and noise.

### • Electrode Placement:

- Electrodes can be placed according to the International 10-20 System, ensuring standardization.
- Common reference points include the nasion, inion, and tragi.

### **Benefits and Limitations**

## **Advantages:**

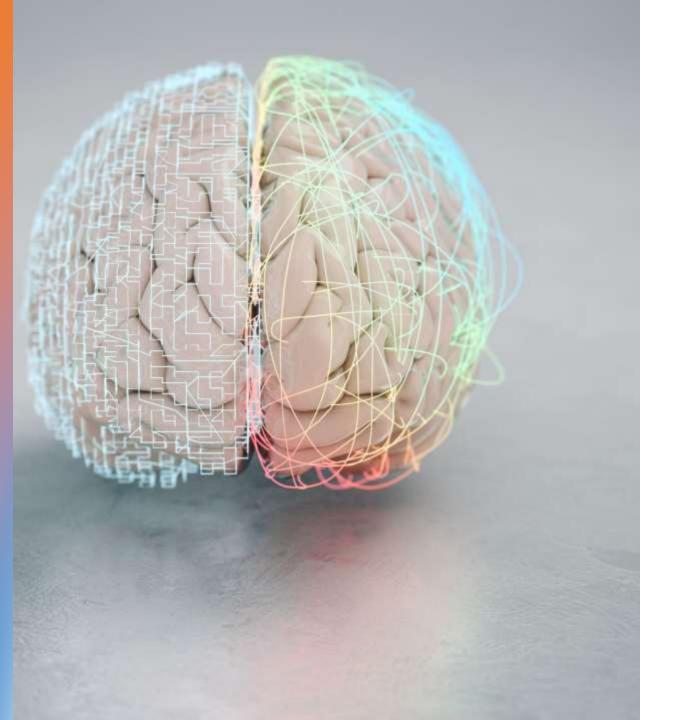
- Non-invasive, cost-effective, portable, and provides rapid results.
- No high-energy radiation or loud noises like MRI.
- Useful for diagnosing epilepsy, studying brain function, and researching cognitive psychology and neuromarketing.



## EEG Test helps to detect-

- Seizure disorders like epilepsy
- Sleep disorders
- Dementia
- Head injury and concussion
- Encephalitis





### • Limitations:

- Biased towards detecting electrical signals from the cortex.
- Difficult to pinpoint the exact origin of electrical activity within the brain.

Table 1 Electrophysiological Signals

Signal	Biological	Average	Frequency	
	source	amplitude		
Electrocardiogram	Heart	1-5 mV	0.05-100	
(ECG)			Hz	
Electroencephalogra	Brain	10-50 μV	0-150 Hz	
m (EEG)				
Electromyogram	Muscles	0.1-1 mV	40-3000 Hz	
(EMG)				
Electrooculogram	Eyeball	0.05-3.5	0-125 Hz	
(EOG)		mV		

#### ROBERT BLACKENG

Spain players always believed in me, says coach de la Fuente



#### **OPEN FOR DISCUSSION**

Now is not the time to decide on my England future: Southgate



Gareth Sewithgate is leaving his luture as England Invenager open for rows when his team's less to Spain in the Euro 2024 final. "I short! Which now is a guest lime to make a desidant the their. For gaining to ball to the right prophe," Sewithgate sold British Investigation ITV after the final. "ITJ just out for nows."

#### PERC OF NEIGHBERS

Scaloni hails Argentina for a hat-trick of major triumphs



Argentina's win over Colombia in the Cope America final on Sund-meant that I became the final South American search is won-time straight major titles after the 2021 Cope America and 2022 World Cope. "I don't know if it marks an era, but it's true that this team trees weens to surprise," Scalami said.

#### RESERVED BY BEING BERNING

The delay to the final affected us, savs Colombia gaffer Lorenzo



Colombia coach Heater Corenzo said his team had been empacted by the delayed start in the Capa America linu.<sup>2</sup> We had a very gon hull-lay to the game lost then some unusual situations started to happen.<sup>2</sup> he said referring to the 62 minute delay to the match caused by smooth and country problems at the stadium.

#### Spain and Argentina crowned continental kings

While the La Boja defeat England, thanks to Ovarzabab late goal in Berlin, Messi & Co. defend their title on the back of Lautaro Martinez's II2th-minute strike in Miami



#### ELBO 2024

Agence France Presse

S ubstitute Mikel Oyar-cabal scored a dra-matic late winner as Spain triumphed in Sumspain triumphed in Sam-day's Eure 2024 final, beat-ing England 2-1 to confirm its re-emergence as a force to the second of the second England had been freaming of winning a fest title in almost six decades and it looked as if it could be its right as Spois lost in-thernital mulfisheler Endri

to injury at half-time.

Yet Spain shrugged that
off to take the lead within off to take the lead within two minutes of the restart through Nico Williams, who was set up by his fel-low star winger, Lamine Yamai.

Yami.
England came from behind as it has done so often
at this Euros, substitute
Cole Palmer driving in the
equalities on 73 minutes,
moments after entering the
free.

fray. Hut its resurgence in the game was cut short when Oyarzabal, the Real Socie-dad forward, turned in a cross in the 86th minute to

and spain a record fourth. European Championship crown, and a third in the last five editions.

Olmo's vital clearance Olmo's vital clearance Spain then held on, alth-ough only after a vital clea-ter of the control of the United to down Marc Guella. B praviously won in 1964, 2008 and 2012, the last two tithes coming eith-19010 World Cup during the golden era of Navi Hernan-dea, Xabi Alonso and Andrea Insiesta. Whether this genera-

CTION

tion, led by the brilliant Vamal playing here a day after his 17th birthday, manage to repeat the achievements of that magnificent side re-mains to be seen, but

mains to be seen, but Spain's was a firting victory. Spain has been the best seam over the last mouth in seam over the last mouth in mislated by the amought-ore at the clympiastation, where the majority of the crowd were given over to After the agony of its de-feat on penalties to lad there years ago, England is the fires side to lose buch

to-back ituro finals. The result (final): 3pain 2

con one lipatin housement the first country to closely hour furo crowns (1964, 2008, 2002, 2004), involving start Gurmany's three The lipating was severe secressive materines in this action, the first time a tourn tree school of the start of the second action, the first time a tourn tree school of the start of the second property. The second is given, heading the record it set at Sort 2000 and France's termaneum they at 24 in

# around the 2010 World

#### COPA AMERICA

Annochated Press

Argentinu won its second straight Cops. America in glades by Mesai's second-half leg injury to heat Combia 10 on Sunday, mea's 1920-minute goal. Mesai appeared to sustain a non-contact injury in the 64th minute and covered his face with his series and to heat the second half the second

bands as he sat on the bench and solbed. Lausaro Martines later ran to that bench to hug his captain after the goal that propelled Argentina to its record 16th Copa mile.

Emulating Spain
In a match that started I
hour, 22 minutes late because of crowd trouble at
Hard look Stadium. At
Hard look Stadium. At
the starting in the follow
at raught major eithe follow
ing the 2021 Copa America
and 3022 World Cup and
matched Spain, which
won the 2008 and 2012
Kutepean Championnings

Making his 39th and possibly last Copa America Cup.
Argentina also stopped Colombia's 29-game un-beaten streak dating to a February 2022 less to the appearance at age 37, Mea-at had one goal in the tour-nament. He went down af-

nament. He went slown af-ter an ankle was stepped-on in the first-half but re-mained in the game-nian stepped on the game-gressive and furried good keeper formitiano Martinea to make four saves in the law-half, but Argentina ba-frachalf, but are to the Nicolae. Tagliañco thought he sored in the '5th minus but was ruled february 2022 loss to the Albiceleste. Lastaro Martines en-tored in the 97th minute and accred from thousin Lo Cebso's perfect through

who replaced Messi, was stopped by Vargas in the soft minute.

The grass was beavily watered with aprinklers following the half-time performance by Gelom-bian pop sur Shakira, which caused an extended half-time break.

The result (finet): Argoritro 1 % autore Martines 142) to



Perfect finish: Lauten blackers capped a sensational compage, with a winner in color time, or

#### Euro final loss will hurt for a | Di Maria realises dream, bids golden goodbye long time: England's Kane

#### Agence France Presse

England captain Harry Ease said Sunday's Euro 2024 final loss to Spain, the Three Lions' second-successive defeat in the tour-nament's show-piece game, will "hurt for a long

England lost the Euro England less the Euros 2020 final on permitties to finity at Wembley. Speaking with ITV, the England captain, who was subbed off after 60 mi-nutes, said the latest major tournament hearthreak af-ter Spain's late winner was "tough to sike".



"It's hard to put into words how we're all feeling right now... we did well to get back into the game and struggled to build on that," added kinne.

## Top strikers, seerall strikes Species this street live), arms foreign bilinarianter live), arms foreign brother treet live), transfer lives foreign and foreign arms foreign lives (first lives), and lives (first lives), and lives (first lives), and lives guada such there were 117 goals in the phila stillion at an average of 2.30 per maach.

Business stellers Operation was at the right place at the right time to being the English not, GETT makes

"We've been coming from behind all tourns-ment, we've got it in the locker. We distn't take the next step and win it," Kane said.
"The second half was better and we got the goal.

We got caught with a cross and that's the final."

#### the final minutes of extra-Agence France Presse



Argentina winger Angel th Maria said Bunday's Copa America triumph over Co-lombia was the perfect ending to his career with

the national team.
The 36-year-old winger had announced in Novem-

had amounced in Novem-ber that he would retire from international duty of the third continuous. Self-siti to was the last Copa America and if ended bere-talreamt that I would reach the final, I dreamt that I would win it, that I would retire like this, he said. Argentine coach Lionel Scaloni took Di Maria off in

time, ensuring he received a huge larewell from the team's fans which his eyes showed be was moved by.

#### Beautiful feelings

beautiful feelings. I am eterrally feelings... I am eterrally feelings. I make me everything, they made me achieve what I wanted as mind of a generation with Liouse Messia White worn the Olympias in 2008 feel from the Olympias in 2008 feel from missing out in the final stages of fournaments to the fruits of the feelings of the final stages of the feelings.

But the "Triple Crown", America in 1975

which also bands the Ar-gentine a record 16th Cops, confirms Lionet Scalon's team's place is among the greats of Routh American football.

"It seems easy but it is very difficult. I know be-cause I lived on the other side too for ten. II years, fighting for it," said the

Argentine titles 1931, 1935, 1937, 1838, 1837, 1941, 1945, 1846, 1947, 1955, 1837, 1950, 1891, 1863, 2021 and 2024

## Spain and Argentina crowned continental kings

While the La Roja defeat England, thanks to Ovarzabal's late goal in Berlin, Messi & Co. defend their title on the back of Lautaro Martinez's 112th-minute strike in Miami



Dominant force: Morata's men remained unbeaten in their remarkable journey, GETTY IMAGES

**EURO 2024** 

Agence France-Presse BERLIN hand Spain a record fourth European Championship crown, and a third in the last five editions.

Olmo's vital clearance

tion, led by the brilliant Yamal playing here a day after his 17th birthday, manage to repeat the achievements of that magnificent side remains to be seen, but to-back Euro finals.

The result (final): Spain 2 (Williams 47, Oyarzabal 86) bt England 1 (Palmer 73).



Champion mentality: Messi's injury did not deter Argentina as it retained the title. AFP

COPA AMERICA

Associated Press

around the 2010 World Cup.

Argentina also stopped Colombia's 28-game unbeaten streak dating to a February 2022 loss to the ment-high fifth.

Making his 39th and possibly last Copa America appearance at age 37, Messi had one goal in the tournament. He went down afoffside. Nicolas Gonzalez, who replaced Messi, was stopped by Vargas in the 95th minute.

Numerous players lost

Confederation +	Championship +	Editions +	Inaugural +	Teams +	Most titles		Current champions	
					Team(s)	Title(s)	Team	Edition +
AFC	AFC Asian Cup	18	1956	24	Japan	4	□■ Qatar	2023
CAF	Africa Cup of Nations	34	1957	24	Egypt	7	■ Ivory Coast	2023
	African Nations Championship	7	2009	16	DR Congo Morocco	2	■•■ Senegal	2022
CONCACAF	CONCACAF Gold Cup	17	1963	16	■•■ Mexico	12	■•■ Mexico	2023
	CONCACAF Nations League	3	2019–20	41	United States	3	United States	2023–24
CONMEBOL	Copa América	48	1916	10	Argentina	16	Argentina	2024
OFC	OFC Men's Nations Cup	10	1973	8	New Zealand	6	New Zealand	2024
UEFA	UEFA European Championship	17	1960	24	Spain	4	Spain	2024
	UEFA Nations League	3	2018–19	55	France Portugal Spain	1	Spain	2022–23

## **♦ The Indian EXPRESS**

JERDAY, JULY 16, 2024, NEW DELHI, LATE CITY, 20 PARES

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OPTIONAL CLASSES



BUNDADIS AS UNUAL BYUNNY





AKISTAN TO BAN ARAN'S PARTY FOR EING 'ANTI-STATE' RAEL STRIKES VEEKEND ATTACK IN

#### RDER TO POLICE

Assum: If CAA overs person, lon't refer case o foreigners' ribunals

#### UKRITABARUAH

riscted the state's barrier police of to directly refer citizen day ness of "Hirehs, Sikh, Bankhus, in, Parsi w Christian" people, to entered india before the

where been fold for executings earlier apply for efficient duple for the control points of the control points at financy see in the for its imple acking of the citizenship energy for Hindus, Sikhs, addition, Jains, Parsis and

.3014. However, Assam, which ares a long border with ngladesharstwhen the quiner of "liberal interrigentions" from

#### ADDRESS TO NATION

#### Day after Trump shooting, Biden says 'lower the temperature'

No place for this kind of violence, any violence... no exceptions: US President



Donald Trump arrives in Milwaukee for the Republican convention on Sunday, August MORE REPORTS, PAGE

#### MICHAELDSHEAR

Cs PREMITERY for Didentication a prime Give Chal Office address on Sunday that the notion conded

fice for only the third time in his prosidency. "There is no place in Access a for this land of violence Societica in the saint of verticates, for any violence, see: Period. No exceptions, the care label of the exceptions, the care label of the exception. The power to change America. The said, "should always rest in the hands of the people, not in the hands of a would-be assessing."

CONTINUED ON PAGE 2

enaptry's politics.
"We cannot, we insult not, go down this road in America," he

#### Viswanathan Anand, wife Aruna, Arjun Erigaisi at Adda today





**EXPRESS NEWS SERVICE** WITH BUDIA'S D Gularuh prepu ang to take on reigning champton Ding Liren of China in the World Clara Champton buy tills clash

## RELIGARE The Indian EXPRESS ADDA



in Bingapore in Movember December, there's no one better than a five-time world cham-pion to decode what that mi-

## L HAHOM GHANA

THE ARCHEOLOGICAL Survey of India (ARI) on Muselay submit-ted Its survey report on the da-puted Bhojahala temple-Karnal Musta mosque crimplex in Diar

and character of the struc-needs to be "demystified aid fried from the shackles o

#### The structure in Dhar. Madnya Pradesh. 446

that the 'sdentilli reventuation' blindus report the ASI-pro in Goddens Vanders sat), while Musians

#### OLI TAKES OATH AS NEPAL PM

New Nepal Prime Minister K P Ob (right) with outgoing Prime Minister Pushpa Kamal Bahal after (aking oath of office at the Presidential residence in Kathmandu, Monday, Ar. 1866).

#### 3 Opp states say no to PM-SHRI, Centre stops school scheme funds

Delhi, Punjab cite state schemes, Bengal objects to name

#### AUHINAYA HARIOOVIND. DIVYAGOYALGOPALA ATRIMITRA

THE EDI/CATION Minustry has simpped funds under the samages sheates Abroyen (SSA). The flagship school education programme, so bellis. Fungals and West Hengal because of their relactance to participate in the

The scheme, with a budget of Bengal — are jet to sign the Mol.1 vet B) 27,000 cross for the level White Tamil Nadu and Revala over the 27,000 crose for the next user 18, 27,000 caces for the invertible system — the Control is supported in sheadale 0072, of the financial breaking and the states 4072. — aims to upgrade 41 leads 44,500 given invest of choods into "secreptar" institutions to above case the properuserstation of the featural Education Policy (NBP) 2020, Matthe have the contribution of the co

their participation by signing a Memorandom of Understanding (MoU) with the

guerters, nor the first installment for the current financial year's April-June quarter. This has

have indicated their willingness. Dellu, Prinjah and West Bengal Donit, Pringer and Very Brings have enforced, referred by printing-ing the Covince to enough their this the Covince to enough their this The three states have not re-ceived the third and fourth in-tralliments of 55% funds for the last financial year's October-December and January-March

Express has learned.
The election watchdog has received eight applications for youthcaron of ID/Ms used in the



#### Post-poll EVM check: EC looks at mock poll with up to 1,400 votes

THE PLECTION CON tocol for the Supreme Court-ndated verification of the Oronte Vitting Machines (EVMs) used in the just-con-cluded task Saltha polls is likely to include a mack poll, permitting randidates to cast up to 1.400 votes on the machines so-lected for the process. The Indian



Court order in April, when, for the

the right to redevent/lonion of









#### Beyond the photo: With Yamal, Williams and Euro victory, Spain crosses a race barrier

#### ANDIP G

N ICONIC Rootsall photograph as born on Sunday, after Nico

as born on Sunday, Afré Nico (Hibarris openied scoring for sin, firms a love lamino Vanual sin, firms a love lamino Vanual sian, firms a love lamino Vanual sian, firms a love lamino Vanual sian, firms a love lamino Vanual subardin freetin. Williams is to-ed the corner Rag, flashing a sub delive. Air popone fact on subscidence, lamino propose fact on s



game against Albimos Maenna-Aurious Williams retorted: There are foods in all prizes. So it's not a big deal, we have to keep working so that this changes bit by bit, as in the end changes his by but, as in the end we are having an internal and external fight against this. It is what trie.

The bitter neality is that Spain

The better induly setting Spaint had not intergenent intro the garrier, unlike England, into the garrier, unlike England, framer Postings, Germany, beignant and the Notherlands, Varnat's father Mounts Varnat's father Mounts Varnat was fixed #100 for Proving Octof WOLED ON PAGE 2

## Return on foreign currency assets doubles in two years

#### **GEORGE MATHEW**

MUMBAI, JULY 15

WITH INTEREST rates rising in the US and other developed countries amid high inflation, the return, or the interest earned, on India's foreign currency assets doubled to 4.21 per cent during the fiscal ended March 2024 from 2.11 per cent in March 2022, the Reserve Bank of India (RBI) said.

The foreign currency assets comprise of multi-currency assets that are held in multi-asset portfolios. The total value of securities in FCA was \$468.98 billion as of March 31, 2024. This means on a 4.21 per cent return, RBI would have earned over \$19 billion as interest income. The rate of returnon FCA was 3.73 per cent in FY23 and 2.1 per cent in FY21 and 2.65 per cent in FY20, the RBI said in its reply to the RTI application filed by The Indian Express.

The US Federal Reserve hiked the effective federal funds rate (EFFR) to 5.33 per cent in the last two years, which is higher than the long-term average of 4.61 per cent. The EFFR is the interest rate set by the Federal Open Market Committee (FOMC) for banks to borrow money from each other. The US Federal Reserve sets an upper and lower limit for the EFFR and aims to keep it within that range by adjusting the target range for the federal funds rate. The current target range is 5.25 per cent to 5.5 per cent.

CD (certificate of deposit) rates offered by US banks are in the range of 5.2 per cent. On the other hand, the RBI's main policy rate – Reporate – is currently 6.5

# RETURN ON FCA Year Return (%) 2019-20 2.65 2020-21 2.10 2021-22 2.11 2022-23 3.73 2023-24 4.21 Source: RBI

offers an interest rate of 7 per cent on two-year deposits, at least 200 basis points higher than the US banks.

As of July 11, 2024, the annual inflation rate in the US was 3 per cent for the 12 months ended in June, down from the previous rate increase of 3.3 per cent. This is

## YOUR RIGHT TO KNOW

APPLICATION

lower than the long-term average of 3.28 per cent. After adjusting for inflation, the return on FCA is positive for the RBI.

Meanwhile, the RBI reduced the gold kept in safe custody with the Bank of England and the Bank for International Settlements (BIS) by around 50 tonnes to 387.26 metric tonnes during FY24. The RBI apparently reduced the gold held abroad due to the high cost involved. "The information cannot be provided as it falls under the category of information which is ex-

the Right to Information Act 2005," the RBI said in its RTI reply when sought the cost of keeping gold in safe custody abroad.

As at end-March 2024, the Reserve Bank held 822.10 metric tonnes of gold, of which 408.31 metric tonnes were held domestically. While 387.26 metric tonnes of gold were kept in safe custody with the Bank of England and the Bank for International Settlements (BIS), 26.53 metric tonnes were held in the form of gold deposits.

Union Road Transport and Highways Minister Nitin Gadkari had earlier pitched for formulating a policy for using the RBI's rising foreign exchange reserves for funding road projects, saying the country needs low-cost finance for such infrastructure projects. However, the RBI has the mandate to invest up to \$5 billion in the bonds issued by the India Infrastructure Finance Company (UK) Limited. As at end of March 2024, the amount invested in such bonds stood at \$932 million.

As at end-March 2024, out of the total FCA of \$ 570,95 billion, \$ 468.99 billion was invested in securities, \$62.17 billion was deposited with other central banks and the BIS and the balance \$ 39.79 billion comprised deposits with commercial banks overseas. With the objective of exploring new strategies and products in reserve management while diversifying the portfolio, a small portion of the reserves is being managed by external asset managers. The investments made by the external asset managers are governed by the permissible ac-

### **Interest Rate Rise and Impact:**

The Reserve Bank of India (RBI) reported that returns on India's foreign currency assets (FCA) doubled to 4.21% in March 2024, up from 2.11% in March 2022.

This rise is due to increasing interest rates in the US and other developed countries amid high inflation.

## **Composition of FCA:**

FCA includes multi-currency asset portfolios.

The total value of FCA securities was \$468.98 billion as of March 31, 2024.

The RBI earned over \$19 billion in interest income at a 4.21% return rate

### • US Federal Reserve's Role:

- The effective federal funds rate (EFFR) was increased to 5.33% over two years.
- The EFFR influences the rate banks charge each other for borrowing.

### Investments and Returns:

- The RBI invests FCA in bonds and other securities, such as those issued by the Indian Infrastructure Finance Company (UK) Limited.
- As of March 2024, FCA's total was \$570.95 billion, including \$468.99 billion in securities, \$62.17 billion in deposits with central banks, and \$39.79 billion in commercial bank deposits.

## **Gold Holdings:**

The RBI held 822.10 metric tonnes of gold, with 387.26 tonnes in safe custody abroad.

### **Policy Recommendations:**

Union Minister Nitin Gadkari proposed using the rising FCA reserves to fund road projects due to the need for low-cost finance.

- Consider the following statements regarding the return on India's foreign currency assets (FCA):
- 1. The return on FCA doubled to 4.21% in March 2024 from 2.11% in March 2022.
- 2. The total value of FCA securities was \$570.95 billion as of March 31, 2024.
- 3. The effective federal funds rate (EFFR) was raised to 5.33% over two years.
- Which of the above statements is/are correct?
- a) 1 and 2 only
  - b) 2 and 3 only
  - c) 1 and 3 only
  - d) 1, 2, and 3

## Kharchi Puja

- Recently, Kharchi Puja, which is observed annually on the Shukla Ashtami day of the lunar month of Ashadha, was celebrated.
- During the Puja day, the 14 gods are ceremonially taken by the royal priests known as "Chantai" to the river "Saidra" for bathing in its holy waters, after which they are reverently returned to the temple.
  - Throughout the festival, the Tripuri people not only venerate their **14 deities** but also pay homage to the earth.

- History: Although the festival has its roots in tribal customs, it is now celebrated by both tribal and nontribal communities in Tripura.
- According to belief, **Tripura Sundari**, the Mother Goddess and **guardian deity of Tripura**, menstruates during June also called as **Ambubachi**. There is a widespread belief that the Earth becomes impure during her menstruation.

## Puja Khedkar Controversy

 Puja Khedkar, a probationary IAS officer, is in controversy over her alleged misuse of power as a civil servant.

#### About

- Similarly controversy, regarding Abhishek Singh, 2010 batch former IAS officer for allegedly using a fake disability certificate to qualify for the exam came into picture.
- These incidents not only raise question marks on the selection process of recruitment agencies but also ponder on the need to overhaul the selection process.

**Ethical Issues** 

**Abuse of Power and Privilege** 

**Integrity and Honesty:** 

**Nepotism and Undue Influence** 

**Accountability and Transparency** 

**Public Trust and Confidence** 

## Puja Khedkar has no major physical disability: Doctors

Trainee IAS officer is 7% disabled, minimum 40% needed to avail benefits, says YCM hospital dean

#### ANURADHA MASCARENHAS

PUNE. JULY 15

THE MEDICAL board at Pimpri's Yashwantrao Chavan Memorial Hospital certified that Puja Khedkar, the controversial trainee IAS officer, has 7 per cent locomotor disability. "In effect, this does not mean any major physical disability. The benchmark to avail of benefits is 40 per cent disability," Dr Rajendra Wabale, Dean, YCM hospital told The Indian Express.

Dr Wabale said that on August 24, 2022, Puja Manorama Dilip Khedkar was a case of locomotor disability.

#### Benchmark

"The diagnosis in her case is an old ACL tear with left knee instability. She has 7 per cent permanent disability in relation to her left lower limb as per the guidelines," the YCM hospital's disability certificate (a copy of which is with The Indian Express) stated. The diagnosis was given by Dr Milind Lokhande as part of the medical board team's assessment.

Dr Nagnath Yempalle, civil surgeon at Pune's District Hospital told The Indian Express that once the certification is generated by a hospital, the application 'auto cancelled' at their facility.

In Pune, 9 centres including Sassoon General Hospital, District Hospital, YCM Hospital, Kamala Nehru Hospital and others, are assigned to carry out assessments to certify a person's condition, after which disability certificates are generated.

The district civil surgeon in Ahmednagar told the press on Sunday, that the then medical boards of the hospital had issued Khedkar a visual disability certificate in 2018 and a mental disability certificate in 2021, respectively. Also, the then board had issued her a combined certificate for medical disabilities in 2021.

In 2022, however, Khedkar had sought disability certificates from YCM and District Hospital.

#### Areas of disability

There are 5 major areas where disability certificates are issued - locomotor, visual, hearing, mental (dyslexia and others) and blood disorders (like haemophilia, thalassaemia. There are another 21 subsets of disabilities under the five categories and accordingly the applications are processed. Once the application is submitted online the candidate then selects his/her preference of hospital where tests are carried out and accordingly certificates of disability are issued.

Since our system showed that Khedkar has already been issued 7 per cent locomotor disability by YCM hospital, the application got auto cancelled at District hospital (Aundh)Pune," Dr Yempalle added.

## Debate on Menstrual Leave Policy

• The Supreme Court's recent comment that a mandatory menstrual leave policy might be counterproductive highlights the complexity of this issue. The court urged the Centre to create a model policy, considering potential misuse and ensuring it doesn't hinder women's workforce participation.

•

## What is a Menstrual leave?

It is a type of leave where a woman may have the option to take paid or unpaid leave from her employment if she is menstruating and is unable to go to work because of this. According to a study, out of the 40% of women who are part of the labour force 20% experience a condition called dysmenorrhea that causes pain during menstruation.

### **Menstrual Leave in Other Countries**

Taiwan and Zambia: Have policies but face implementation challenges.

**Spain**: Introduced paid menstrual leave in 2023, with low uptake due to complex processes and fear of discrimination.

<u>Indonesia</u>: Offers two-day leave, seldom used due to required medical examinations.



Form On Whools

Strawberries are not true berries, but bananas are? Botanically speaking, a berry is defined as a fleshy fruit that develops from a single ovary and contains seeds on the inside. While strawberries have their seeds on the outside, the real surprise is that bananas, which are often considered a typical fruit, are actually classified as berries!

## Word of the day

## **Nebulous:**

lacking definite form or limits; lacking definition or definite content

Synonyms: cloudy, unfixed

**Usage:** She rejected his draft giving nebulous reasons.

Pronunciation: bit.ly/nebulouspro

International Phonetic Alphabet: /ˈnɛbjʊləs/

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Preparation App The best prep for SSC , RAILWAYS , HT , NEET & more CLASS24 **DOUBT SESSION** 

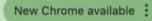


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