DAILY CURRENT AFFAIRS 14-06-2025

GS-2

1. **Global Gender Gap Report**

2. **Exercise Shakti**

GS-3

3. **Merchant Discount Rate**

4. **Salmonella**

5. **What is a Black Box?**

Global Gender Gap Report

Syllabus: GS-2: Social Sector – Gender equality.

Context:

India has ranked 131 out of 148 countries, slipping two places from its position last year in the WEF's Global Gender Gap Report 2025.

Global Gender Gap Report 2025 – Summary

Why in News?

- India **ranked 131st out of 148 countries** in the **Global Gender Gap Report 2025** by the **World Economic Forum (WEF)**.

- It **fell two places** from **129th in 2024**.

- **India's gender parity score:64.1%** (i.e., the country has closed only 64.1% of its gender gap).

About the Global Gender Gap Index

- **Launched:** 2006 by the **World Economic Forum**.

- **Purpose:** Assesses countries on their progress toward gender parity.

- **Dimensions (4):**

    1. **Economic Participation and Opportunity**

    2. **Educational Attainment**

    3. **Health and Survival**

    4. **Political Empowerment**

- **Scoring:** Scale of **0 to 1**, where **1 = full parity** and **0 = total inequality**.

- **Objective:** Strategic tool for tracking, comparing, and designing gender gap policies worldwide.

India's Performance (2025)

Improvements:

- **Economic Participation**: Rose to **40.7%**, with income parity improving from **28.6% to 29.9%**.

- **Educational Attainment**: Reached **97.1%**, reflecting near-universal literacy and enrolment.

- **Health and Survival**: Improved due to better **sex ratio** and **life expectancy**.

Declines:

➤ **Political Empowerment**: Declined by **0.6 points**.

    o **Women in Parliament**: Down from **14.7% to 13.8%**.

    o **Women ministers**: Dropped from **6.5% to 5.6%**.

Regional and Global Comparisons

➤ **South Asia:**

    o Bhutan: 119

    o Nepal: 125

    o Sri Lanka: 130

    o Bangladesh: 24 (Best in the region, major gains in political empowerment)

    o Pakistan: 148 (Lowest globally)

➤ **Top Global Performers (2025):**

    Iceland (for 16th year)

    Finland

    Norway

    UK

    New Zealand

➤ Global Gender Gap Closed: 68.8%

➤ Estimated Time to Full Parity: 123 years

Key Strides by India to Bridge Gender Gap

Policy & Legal Reforms

➤ **Nari Shakti Vandan Adhiniyam (2023):** 33% legislative reservation for women.

➤ **106th Constitutional Amendment:** 33% seats for women in Lok Sabha and state legislatures.

Education and Skilling

➤ **Schemes**: Beti Bachao Beti Padhao, Vigyan Jyoti.

➤ **Female GER**: Up from **42.5% (2017–18)** to **46.3% (2022–23)**.

Economic Participation

- **Female LFPR**: Increased from **23.3% (2017-18)** to **41.7% (2023-24)**.
- **Entrepreneurship Support**: Stand-Up India, Mahila e-Haat.

Social Change & Financial Inclusion

- **Jan Dhan Accounts**: 28+ crore women beneficiaries.
- **Changing Norms**: Increased media portrayal of women in leadership roles.

Health Improvements

- **Schemes**: PM Matru Vandana Yojana, NHM.
- **MMR**: Declined from **174 (2013–15)** to **97 (2018–20)**.

Major Challenges in Bridging Gender Gap

1. Low Workforce Participation

- Most women employed in informal/agriculture sectors.
- Barriers: Patriarchy, lack of childcare, unsafe workspaces.

2. Educational Disparity

- **Female literacy**: ~65% vs male 82% (Census 2011).
- 40% of girls (15–18) out of school; 23 million dropout due to menstrual stigma.

3. Wage Gap & Unpaid Work

- Women earn **~73%** of men's wages.
- **289 minutes/day** on unpaid domestic work — **3x more than men**.
- **Value of unpaid care work**: ₹22.7 lakh crore (~7.5% of GDP).

4. Leadership Gap

- Only **17%** in C-suite roles.
- **20%** board-level female representation in corporates.

5. Poor Implementation of Schemes

- Gaps in awareness, access, monitoring, especially in rural areas.

Major Government Initiatives

- Beti Bachao Beti Padhao
- Mahila Shakti Kendra
- Mahila Police Volunteers

- Rashtriya Mahila Kosh
- Stand-Up India
- Mahila-e-Haat
- Entrepreneurship and Skill Development Programme (ESSDP)
- One-Stop Centres, Nirbhaya Fund

Way Forward: Measures to Strengthen Gender Parity

1. Legal & Institutional Support

- Stronger implementation of POCSO, DV Act.
- Scale-up One-Stop Centres and Nirbhaya initiatives.

2. Economic Empowerment

- Support formal workforce entry: crèches, hiring incentives.
- Recognize unpaid work: time-use surveys, social security for domestic work.

3. Education & Digital Inclusion

- Ensure retention of girls via scholarships, menstrual support.
- Bridge digital gender gap via **PMGDISHA** and mobile access in **Aspirational Districts**.

4. Health & Infrastructure

- Expand maternal and reproductive services under **NHM**.
- Address malnutrition via **POSHAN Abhiyaan**.
- Gender-safe infrastructure: CCTV, lighting, women help desks.

5. Inclusive Governance & Data

- Capacity-building for elected women in PRIs.
- Gender Budget Cells in all ministries.
- Regular **sex-disaggregated data** for evidence-based policy.

Exercise Shakti

Syllabus: GS-2; International Relations

Context

➢ The Indian Army contingent left for France to participate in the eighth edition of the Indo-French joint military Exercise 'Shakti' that will take place in France's La Cavalerie from 18 June to 01 July 2025.

What is Exercise Shakti?

➢ **Exercise Shakti** is a **bilateral military exercise** between the **Indian Army** and the **French Army**. It is part of a **series of joint military drills** that India conducts with friendly foreign nations to enhance interoperability, cooperation, and understanding between the armed forces.

Key Features:

➢ **Participants**: Indian Army and French Army
➢ **Type**: Joint military exercise (Army to Army engagement)
➢ **Frequency**: **Biennial** (once every two years)
➢ **Started in**: **2011**
➢ **Objective**: Enhance military cooperation, improve joint operational capabilities, and strengthen Indo-French defence ties.
➢ **Focus Areas**:
  o Counter-terrorism operations
  o Urban warfare
  o Peacekeeping operations under the UN mandate
  o Tactical and strategic drills

Latest Edition (as of 2024-25)

➢ **Edition**: 7th Edition
➢ **Location**: **France**
➢ **Indian Participation**: A contingent of the Gorkha Rifles Regiment
➢ **French Participation**: Troops from the 13th Foreign Legion Half Brigade
➢ **Theme**: Joint tactical-level operations in semi-urban and urban environments

Importance for India:

➢ Reinforces **strategic ties** with France.

- Enhances India's ability to participate in **UN peacekeeping missions**.
- Promotes **interoperability and joint planning** in real-world scenarios.
- Showcases India's commitment to **global defence cooperation**.

Other Indo-French Military Exercises:

- **Varuna** – Naval exercise
- **Garuda** – Air Force exercise
- **Shakti** – Army exercise (this one)

Probable Prelims Question:

Q. "Exercise Shakti" recently seen in news is a bilateral military exercise between India and which country?
(a) Russia
(b) France
(c) United States
(d) Japan
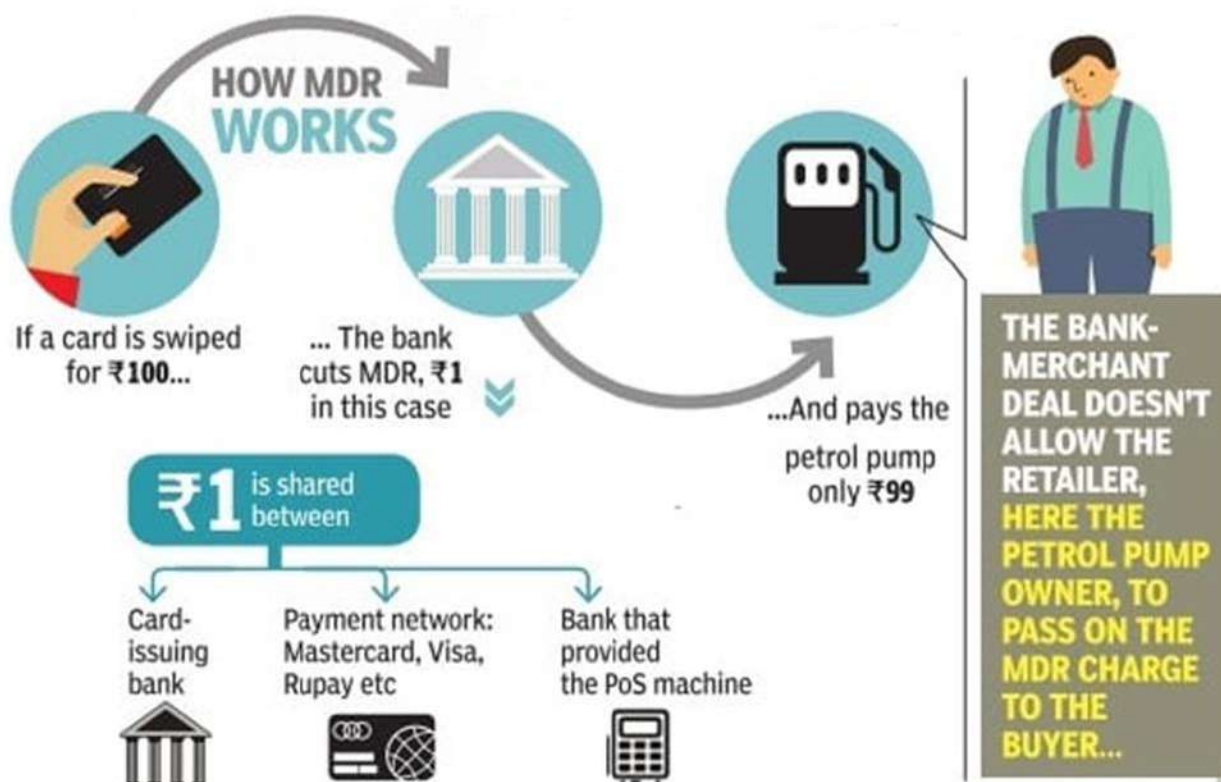**Answer:** (b) France

Merchant Discount Rate

Syllabus: GS-3; Economy

Context

- The Finance Ministry has said that speculation and claims that the Merchant Discount Rate (MDR) will be charged on UPI transactions are completely false, baseless, and misleading.

1. What is Merchant Discount Rate (MDR)?

- MDR is a **fee charged to merchants** by banks/payment service providers for processing digital transactions (via debit/credit cards, UPI, mobile wallets, etc.).
- It is usually a **small percentage of the transaction amount** (e.g., 0.5%–2%) and is shared among banks, payment gateways, and card networks.

2. Components of MDR

MDR is typically divided among three parties:

- ➢ **Issuer Bank** (Customer's Bank)
- ➢ **Acquirer Bank** (Merchant's Bank)
- ➢ **Payment Network** (Visa, Mastercard, RuPay, NPCI for UPI)

3. MDR in India – Key Policies

- ➢ **RBI Guidelines**: The Reserve Bank of India regulates MDR for different payment modes.
- ➢ **Zero MDR for UPI & RuPay (2020)**:
    - o The government **waived MDR** for UPI and RuPay debit card transactions to promote digital payments.
    - o Banks and payment providers opposed this as it reduced their revenue.
- ➢ **MDR for Other Cards**:
    - o Debit Cards: ~0.4%–0.9% (lower for small merchants)

o   Credit Cards: ~1%–3% (higher due to rewards/risk)

4. Sigificance

- **Economic & Financial Inclusion**: MDR impacts small merchants, digital adoption, and cashless economy goals.

    ➢ **Government Policies**: Schemes like **Digital India**, **PM SVANidhi** (for street vendors), and **Jan Dhan Yojana** link to MDR dynamics.

    ➢ **RBI & Finance Ministry Roles**: Questions may arise on regulatory decisions regarding MDR.

5. Recent Developments

    ➢ **2023-24 Discussions**: Some banks requested reintroduction of MDR for UPI to sustain infrastructure costs.

    ➢ **RuPay Promotion**: Govt encourages RuPay over Visa/Mastercard due to lower MDR and domestic control.

Practice Questions

- **"Discuss the impact of zero MDR on India's digital payment ecosystem."**

Salmonella

Syllabus: GS-3: General Science – Biology.

Context:

Drug-resistant Salmonella in recalled salami sickens dozens across Canada; hidden threat in everyday meats and how to stay safe.

Overview

    ➢ **Definition**: Drug-resistant Salmonella refers to strains of *Salmonella* bacteria that are resistant to one or more antibiotics, making infections harder to treat.

    ➢ **Bacteria Type**: Gram-negative, rod-shaped bacilli from the Enterobacteriaceae family.

> ➢ **Impact**: Causes salmonellosis, a common foodborne illness, with symptoms including diarrhea, fever, abdominal cramps, and sometimes severe complications requiring hospitalization.

> ➢ **Public Health Concern**: Antibiotic resistance complicates treatment, increases healthcare costs, and elevates risk of severe outcomes, especially in vulnerable populations (e.g., young children, elderly, immunocompromised).

Causes of Drug Resistance

> ➢ **Overuse/Misuse of Antibiotics**:
>
> > o In humans: Inappropriate prescriptions or incomplete treatment courses.
> >
> > o In agriculture: Widespread use in livestock for growth promotion or disease prevention, leading to resistant strains in animals that can spread to humans.

> ➢ **Horizontal Gene Transfer**: Resistance genes spread between bacteria via plasmids, transposons, or other mechanisms.

> ➢ **Environmental Factors**: Contaminated water, soil, or food supply chains can harbor and spread resistant strains.

> ➢ **Global Travel and Trade**: Facilitates spread of resistant Salmonella across regions.

Key Resistant Strains

> ➢ **Multidrug-Resistant (MDR) Salmonella**: Resistant to multiple antibiotics, such as ampicillin, chloramphenicol, and trimethoprim-sulfamethoxazole.

> ➢ **Extensively Drug-Resistant (XDR) Salmonella**: Resistant to nearly all available antibiotics, including critical drugs like fluoroquinolones (e.g., ciprofloxacin) and third-generation cephalosporins (e.g., ceftriaxone).

> ➢ **Notable Serotypes**:
>
> > o *Salmonella* Typhimurium: Often MDR, linked to foodborne outbreaks.
> >
> > o *Salmonella* Enteritidis: Common in poultry, increasing resistance to fluoroquinolones.
> >
> > o *Salmonella* Typhi: Causes typhoid fever; XDR strains (e.g., in Pakistan) resistant to most antibiotics except azithromycin.

Transmission

> ➢ **Foodborne**: Contaminated poultry, eggs, meat, dairy, or produce.

> ➢ **Waterborne**: Contaminated drinking water or recreational water.

➢ **Animal Contact**: Direct contact with infected animals (e.g., poultry, reptiles, livestock).

➢ **Person-to-Person**: Rare, but possible through fecal-oral route, especially in settings with poor hygiene.

➢ **Cross-Contamination**: Improper food handling or kitchen sanitation.

Clinical Implications

➢ **Symptoms**: Fever, diarrhea (sometimes bloody), nausea, vomiting, abdominal pain; typically last 4–7 days in healthy individuals.

➢ **Complications**: Severe cases may lead to bacteremia, sepsis, or organ infections, especially with resistant strains.

➢ **Treatment Challenges**:

   o MDR/XDR strains limit effective antibiotic options.

   o Requires susceptibility testing to guide treatment.

   o Last-resort antibiotics (e.g., carbapenems, azithromycin) may be needed but are costly and less accessible.

➢ **Increased Morbidity/Mortality**: Resistant infections lead to longer hospital stays, higher treatment failure rates, and increased risk of death.

Epidemiology

➢ **Global Burden**: WHO estimates 93.8 million cases of salmonellosis annually, with 155,000 deaths; drug-resistant strains contribute significantly.

➢ **Hotspots**:

   o XDR *Salmonella* Typhi outbreak in Pakistan (2016–ongoing) resistant to five antibiotic classes.

   o MDR *Salmonella* Typhimurium common in sub-Saharan Africa and parts of Asia.

➢ **U.S. Data**: CDC reports ~1.35 million Salmonella infections yearly, with ~26,500 hospitalizations; drug-resistant strains account for ~20% of cases.

Prevention and Control

➢ **Food Safety**:

   o Cook poultry, eggs, and meat to safe temperatures (e.g., 165°F/74°C for poultry).

   o Avoid cross-contamination in kitchens (separate raw and cooked foods).

- o Wash produce thoroughly.

➢ **Hygiene**:

  - o Handwashing after handling animals, raw food, or using the bathroom.

  - o Sanitize surfaces and utensils.

➢ **Antibiotic Stewardship**:

  - o Restrict antibiotic use in agriculture to medically necessary cases.

  - o Promote appropriate prescribing in healthcare settings.

➢ **Surveillance**:

  - o Monitor resistance patterns via programs like CDC's NARMS (National Antimicrobial Resistance Monitoring System).

  - o Track outbreaks using genomic sequencing (e.g., PulseNet).

➢ **Vaccination**:

  - o Limited vaccines available for *Salmonella* Typhi; none for non-typhoidal Salmonella.

  - o Research ongoing for broader Salmonella vaccines.

➢ **Public Health Measures**:

  - o Improve water and sanitation infrastructure.

  - o Enforce food safety regulations in production and supply chains.

Current Research and Trends

➢ **Genomic Studies**: Whole-genome sequencing identifies resistance genes (e.g., *bla*CMY-2 for cephalosporin resistance) and tracks strain spread.

➢ **Alternative Therapies**:

  - o Bacteriophage therapy: Viruses targeting Salmonella under investigation.

  - o Probiotics: Exploring gut microbiome modulation to prevent infection.

➢ **One Health Approach**: Integrates human, animal, and environmental health to combat resistance.

➢ **Emerging Threats**: Rising resistance to azithromycin and colistin (last-resort antibiotics) reported in some regions.

What is a Black Box?

Syllabus: GS-3; Science & Technology

Context

➢ Those boxes, better known as black boxes, record data during flights without interruption and hold crucial information in plane crashes like the fatal accident of an Air India aircraft on June 12, 2025.

Definition:

➢ A **Black Box**, also known as a **Flight Data Recorder (FDR)** and **Cockpit Voice Recorder (CVR)**, is an electronic recording device placed in an aircraft to **facilitate the investigation of aviation accidents and incidents**.
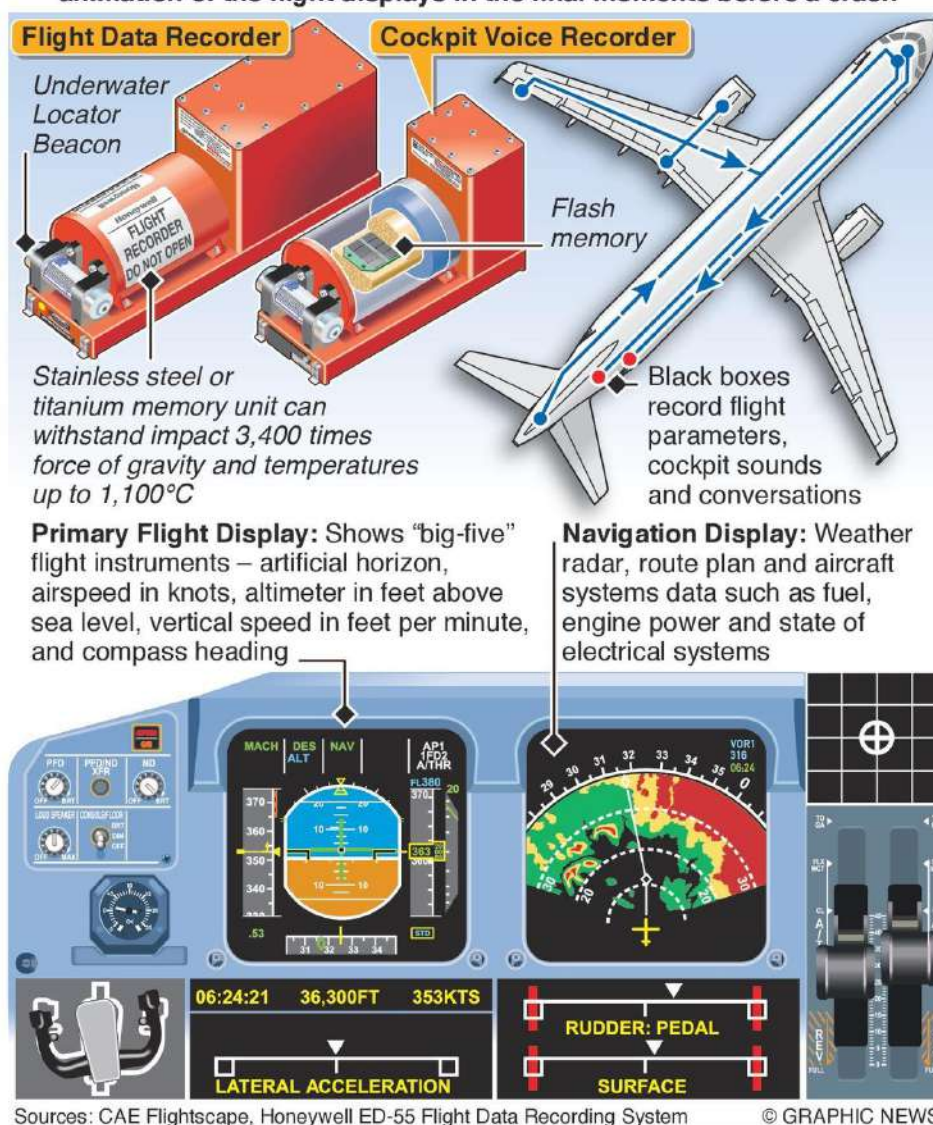
Types of Black Boxes:

1. **Flight Data Recorder (FDR)**:
   o Records flight parameters like altitude, airspeed, engine performance, etc.
   o Helps reconstruct the flight path and behavior.
2. **Cockpit Voice Recorder (CVR)**:
   o Records conversations between pilots and with Air Traffic Control (ATC), along with ambient sounds in the cockpit.
   o Useful to analyze the crew's response and communication before an incident.

Key Features:

➢ **Color:** Despite the name, black boxes are **bright orange** to aid visibility in wreckage.
➢ **Location:** Typically located in the **tail section** of the aircraft (most crash-resistant area).
➢ **Durability:** Built to **withstand extreme conditions** – high impact, deep-sea pressure, fire, and high temperatures.
➢ **Battery:** Equipped with an **Underwater Locator Beacon (ULB)** that emits signals for up to **30 days**.

How black boxes reconstruct a crash

Information from an aircraft's flight data recorder and cockpit voice recorder – the so-called "black boxes" – is used to create an interactive animation of the flight displays in the final moments before a crash

Sources: CAE Flightscape, Honeywell ED-55 Flight Data Recording System © GRAPHIC NEWS

Why is it Important?

➢ Crucial for **aviation accident investigations**.
➢ Helps **improve safety protocols** by identifying causes of crashes.
➢ Provides evidence for **legal and insurance claims**.

Recent Developments:

➢ **Deployable Black Boxes**: Can eject automatically in a crash for easier retrieval.

➢ **Real-time streaming**: Discussions on using cloud-based technologies to stream flight data in real time (especially after the **MH370 disappearance**).

India Context:

➢ The **Directorate General of Civil Aviation (DGCA)** mandates black boxes in all commercial aircraft.
➢ **Aircraft Accident Investigation Bureau (AAIB)** is responsible for investigating air accidents in India using black box data.

Prelims Practice Question:

Q. Consider the following statements regarding aircraft black boxes:

1. They are painted black to blend in with the wreckage.
2. They record both flight parameters and cockpit conversations.
3. They are typically placed in the tail section of the aircraft.

Which of the statements given above is/are correct?

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

Answer: (b) 2 and 3 only
Explanation:

➢ Statement 1 is incorrect. Despite the name, black boxes are orange for easy identification.
➢ Statements 2 and 3 are correct.