

**GENERAL STUDIES**  
**(Paper-I)**  
**CSE (P) 2024**

**Detailed**  
**Explanation**

**DELHI CENTRE**

**Old Rajinder Nagar:**

27-B, Pusa Road, Metro  
Pillar no. 118, Near Karol  
Bagh Metro,  
New Delhi-110060  
Phone: 8081300200

**Mukherjee Nagar:**

1422, Main Mukherjee  
Nagar Road,  
Near Batra Cinema,  
New Delhi-110009  
Phone: 8081300200

**BHOPAL CENTRE:**

Plot No. 46 Zone - 2,  
M.P Nagar, Bhopal - 462011  
Phone: 8827664612,  
8081300200

**JAIPUR CENTRE:**

A-1, Lion's Colony, Sitabari,  
Near The Theme Hotel,  
Tonk Road, Jaipur-302018  
Phone: 9358200511

**PRAYAGRAJ CENTRE:**

31/31 Sardar Patel Marg,  
Civil Lines, Prayagraj,  
Uttar Pradesh - 211001  
Phone: 9958857757

**Expected CSE 2024 Cutoff (Prelims)**

Year	General	EWS	OBC	SC	ST
2024	95 ± 3	88 ± 3	93 ± 3	81 ± 3	75 ± 3

**Note:** The cutoff is based on a comprehensive analysis of data collected from our students and the institute's own assessment. However, please note that despite our best efforts to provide a scientifically accurate prediction, the actual cutoff may vary.

**CSE Year-wise Cutoff (Prelims)**

Year	General	EWS	OBC	SC	ST
2023	75.41	68.02	74.75	59.25	47.82
2022	88.22	82.83	87.54	74.08	69.35
2021	87.54	80.14	84.85	75.41	70.71

**General Studies (Paper-I)  
Analysis of CSE 2024 Preliminary Examination**

Sl.	Subjects	Number of Questions
1.	Economy	14
2.	Environment	15
3.	Geography	18
4.	History	12
5.	Polity	15
6.	Science & Technology	13
7.	Miscellaneous (IR, Society Etc.)	13

## Reflections from NEXT IAS Foundation Class

**1**

### Direct Coverage from class notes

42 questions in the UPSC Civil Services Preliminary Examination 2024 were directly and verbatim covered in NEXT IAS GS Foundation classes. Additionally, numerous other questions, particularly those related to the economy and applied concepts, could be solved by using the concepts taught in our classes.

**2**

### Test Series Alignment

Several questions in the NEXT IAS Prelims Test Series and Anubhav Test Series completely or partially matched the UPSC Prelims paper. We will upload a separate document on the website with the exact number of matches.

**3**

### Foreseeing New Question Patterns

UPSC introduced a format of the question involving a three-statement based assertion-reason, which we had already incorporated in Anubhav Test 5.

Similarly, the "How many" pattern of questions was anticipated and included in Anubhav (P) 2021 prior to UPSC.

**Q.1** How many delimitation Commissions have been constituted by the Government of India till December 2023?

- (a) One
- (b) Two
- (c) Three
- (d) Four

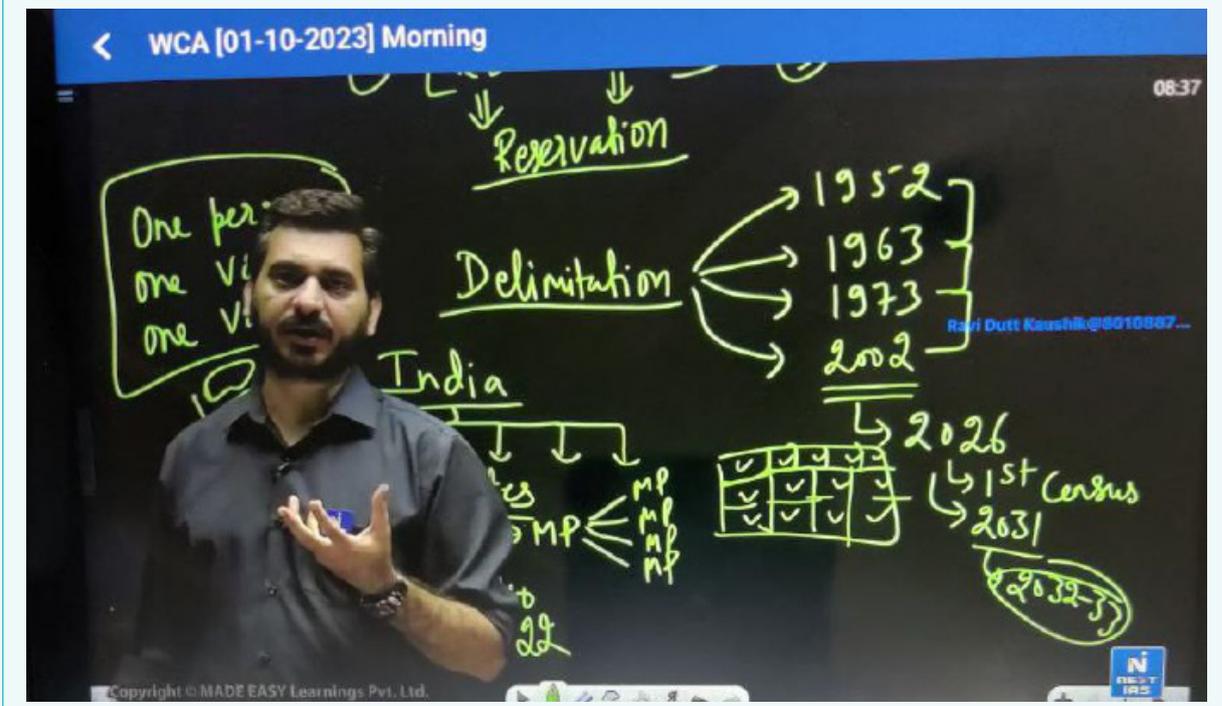
**Ans. (d)**

**Exp. Theme:** Delimitation Commission.

Delimitation means the act or process of fixing limits or boundaries of territorial constituencies in a country or a province having a legislative body. The job of delimitation is assigned to a high power body known as Delimitation Commission. In India, Delimitation Commissions have been constituted 4 times – in 1952 under the Delimitation Commission Act, 1952, in 1963 under Delimitation Commission Act, 1962, in 1973 under Delimitation Act, 1972 and in 2002 under Delimitation Act, 2002. The Delimitation Commission in India is a high power body whose orders have the force of law and cannot be called in question before any court.

**NEXT IAS GS FOUNDATION CLASS REFERENCE**

**Class Notes\_Weekly Current Affairs**



**Q.2** The Constitution (71<sup>st</sup> Amendment) Act, 1992 amends the Eighth Schedule to the Constitution to include which of the following languages?

1. Konkani
2. Manipuri
3. Nepali
4. Maithili

Select the correct answer using the code given below:

- (a) 1, 2 and 3
- (b) 1, 2 and 4
- (c) 1, 3 and 4
- (d) 2, 3 and 4

**Ans. (a)**

**Exp. Theme:** 8th Schedule

**Option (a) is the correct answer:** The Constitution (Seventy-first Amendment) Act, 1992 added four languages i.e. Konkani, Manipuri and Nepali.

**Additional Information:** Bodo, Dogri, Maithili, and Santhali were added by the 92nd Amendment Act of 2003 which came into force in 2004.

**Q.3** Consider the following pairs:

	<b>Party</b>	<b>Its Leader</b>
1.	Bharatiya Jana Sangh	Dr. Shyama Prasad Mukherjee
2.	Socialist Party	C. Rajagopalachari
3.	Congress for Democracy	Jagjivan Ram
4.	Swatantra Party	Acharya Narendra Dev

How many of the above are correctly matched?

- (a) Only one
- (b) Only two
- (c) Only three
- (d) All four

**Ans. (b)**

**Exp. Pair 1 is correct:**

The Bharatiya Jana Sangh (BJS) is credited to have three founders: **Shyama Prasad Mukherjee, Balraj Madhok, and Deendayal Upadhyaya**. While these three individuals played a role in establishing the BJS, Shyama Prasad Mukherjee is often given the main credit.

**Pair 2 is incorrect:**

The Socialist Party is an independent incarnation of the Congress Socialist Party (CSP) formed in 1934 within the Congress. The CSP was founded by Jaiprakash Narayan, Acharya Narendra Dev, Dr Ram Manohar Lohia. It merged itself into the Janata Party in 1977 immediately after the independence.

**Pair 3 is correct:**

As the impact of emergency was felt by everyone, Babu Jagjivan Ram resigned from the Cabinet and the Congress Party on 2 February 1977. He formed his own party, 'Congress for Democracy' (CFD) on 5 February 1977.

**Pair 4 is incorrect:**

The founder of the Swatantra Party is C. Rajagopalachari. He was a prominent figure in Indian politics, having served as the last Governor-General of India before it became a republic.

**Q.4** Which of the following statements are correct about the constitution of India?

- 1. Powers of the Municipalities are given in Part IX A of the Constitution.
- 2. Emergency provisions are given in Part XVIII of the Constitution.
- 3. Provisions related to the amendment of the constitution are given in Part XX of the Constitution.

Select the answer using the code given below:

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

**Ans. (d)**

**Exp. Theme:** Urban Local Bodies

**Statement 1 is correct:** Powers of the Municipalities are given in Part IX A of the Constitution of India. This part was added by the 74th Amendment Act of 1992 and deals with the Municipalities, including their composition, powers, and responsibilities.

**Statement 2 is correct:** Emergency provisions are provided in Part XVIII of the Constitution. This part outlines the various types of emergencies (National Emergency, State Emergency, and Financial Emergency) and the procedures for their proclamation and effects.

**Statement 3 is correct:** Provisions related to the amendment of the Constitution are given in Part XX of the Constitution. Article 368, which is in Part XX, details the power of Parliament to amend the Constitution and the procedure for it.

5. Which one of the following statements is correct as per the Constitution of India?
- (a) Inter-State trade and commerce is a State subject under the State List.
  - (b) Inter-State migration is a State subject under the State List.
  - (c) Inter-State quarantine is a Union subject under the Union List.
  - (d) Corporation tax is a State subject under the State List.

**Ans. (c)**

**Exp. Theme:** Schedule of Indian Constitution.

**Statement 1 is incorrect:** Inter-State trade and commerce is mentioned under entry 42 of Union List.

**Statement 2 is incorrect:** Inter-State migration is under Union List

**Statement 3 is correct:** inter-State quarantine is mentioned in entry 81 of Union list. Statement D is incorrect: Corporation tax is placed under entry 85 of the Union list.

**Additional Information:** The Seventh Schedule of the Indian Constitution, outlined in Article 246, delineates the distribution of powers and responsibilities between the Union (central government) and the States. This schedule is divided into three lists: Union List (List I), State List (List II), and Concurrent List (List III)

6. Under which of the following Articles of the Constitution of India, has the Supreme Court of India placed the Right to Privacy?
- (a) Article 15
  - (b) Article 16
  - (c) Article 19
  - (d) Article 21

**Ans. (d)**

**Exp. Theme:** Fundamental Right

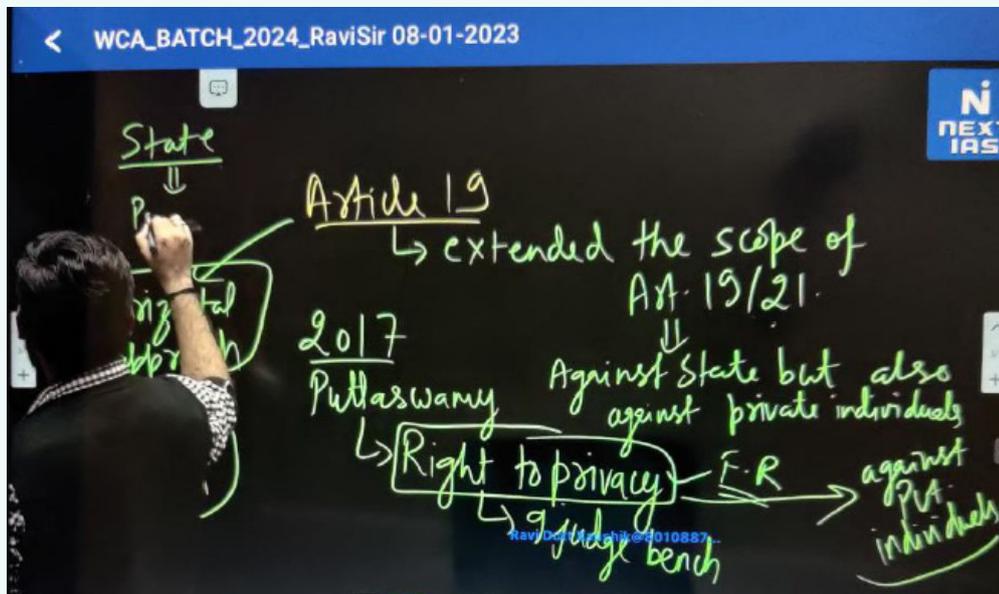
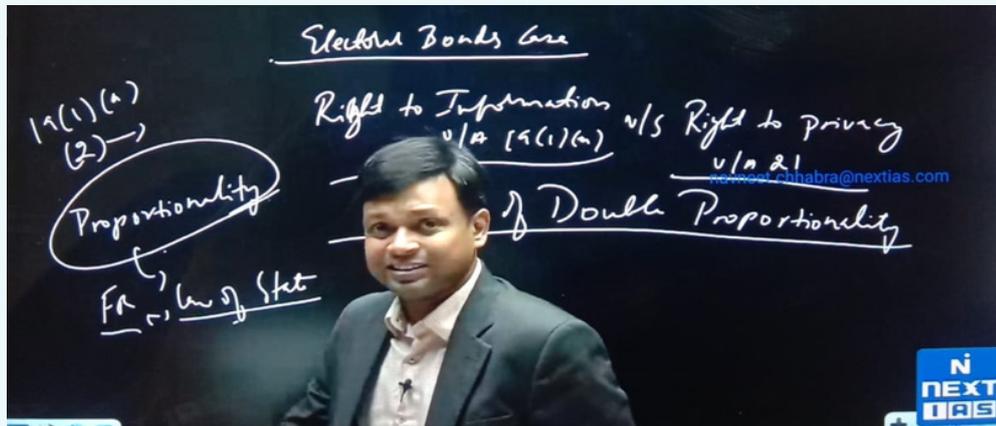
**Explanation:** The right to privacy in India was recognized as a fundamental right by the Supreme Court of India in the landmark judgment of Justice K.S. Puttaswamy (Retd.) and Anr. vs. Union of India and Ors in 2017. The Supreme Court ruled that the right to privacy is protected under Article 21 of the Indian Constitution, which guarantees the right to life and personal liberty.

**Key aspects of the judgment:**

1. **Right to Privacy:** The court held that privacy is an inherent and fundamental right, essential for human dignity and autonomy.
2. **Article 21:** Privacy falls within the ambit of Article 21, which guarantees the right to life and liberty.
3. **Three-fold test:** The court established a three-fold test to determine if a privacy violation occurs:
  - Existence of a privacy interest
  - Unjustified intrusion by the state or non-state actors
  - Balance between individual privacy and state interests
4. **Data protection:** The judgment emphasized the need for data protection laws to safeguard personal information.
5. **Aadhaar scheme:** The court examined the Aadhaar scheme, holding that while it serves a legitimate state interest, it must be balanced against individual privacy concerns.
6. **Privacy as a fundamental right:** The judgment overruled earlier decisions that had limited privacy to specific contexts, instead establishing it as a broad, fundamental right.

**NEXT IAS GS FOUNDATION CLASS REFERENCE**

**Class Notes\_Polity and Weekly Current Affairs**



7. What are the duties of the Chief of Defence Staff (CDS) as Head of the Department of Military Affairs?

1. Permanent Chairman of Chiefs of Staff Committee
2. Exercise military command over the three Service Chiefs
3. Principal Military Advisor to Defence Minister on all tri-service matters

Select the correct answer using the code given below:

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

**Ans. (d)**

**Exp.** The duties and functions of the Chief of Defence Staff (CDS) include the following:

1. To head the Department of Military Affairs in Ministry of Defence and function as its Secretary.
2. To act as the Principal Military Advisor to Hon'ble Raksha Mantri on all Tri-Service matters. **(Hence, Statement 3 is correct)**
3. To function as the Permanent Chairman of the Chiefs of Staff Committee **(Hence, Statement 1 is correct)**
4. To administer the Tri-Service organizations/agencies/commands.

5. To be a member of Defence Acquisition Council chaired by Hon'ble Raksha Mantri.
6. To function as the Military Advisor to the Nuclear Command Authority.
7. To bring about jointness in operation, logistics, transport, training, support services, communications, repairs and maintenance, etc of the three Services.
8. To ensure optimal utilisation of infrastructure and rationalise it through jointness among the Services.
9. To implement Five-Year Defence Capital Acquisition Plan and Two-Year roll-on Annual Acquisition Plans, as a follow up of Integrated Capability Development Plan.
10. To assign inter-services prioritisation to capital acquisition proposals based on the anticipated budget.
11. To bring about reforms in the functioning of three Services with the aim to augment combat capabilities of the Armed Forces by reducing wasteful expenditure.

**NEXT IAS GS FOUNDATION CLASS REFERENCE****Class Notes\_Science & Technology**

Theatre Command and CDS -

After the Kargil War, a review committee was appointed that recommended a unified approach. Stekathkar Committee recommended the creation of CDS. CDS has the following roles to play -

- (1) Advisor to the Defence Minister.
- (2) Head of Dept. of Military Affairs.
- (3) Advisor to Nuclear Command Authority
- (4) Chairman of Chief of Staff Committee.

The first CDS Mr. Bipin Rawat was given the additional responsibility of having Theatre Commands. At present there are 15 commands, 7 each of Army and airforce, 3 Navy and 2 Tri-service command. They will be replaced by 5 TC, 3 of them will be geographical which includes Northern Command to look after Ladakh, J&K and the middle sector of Inds-China.

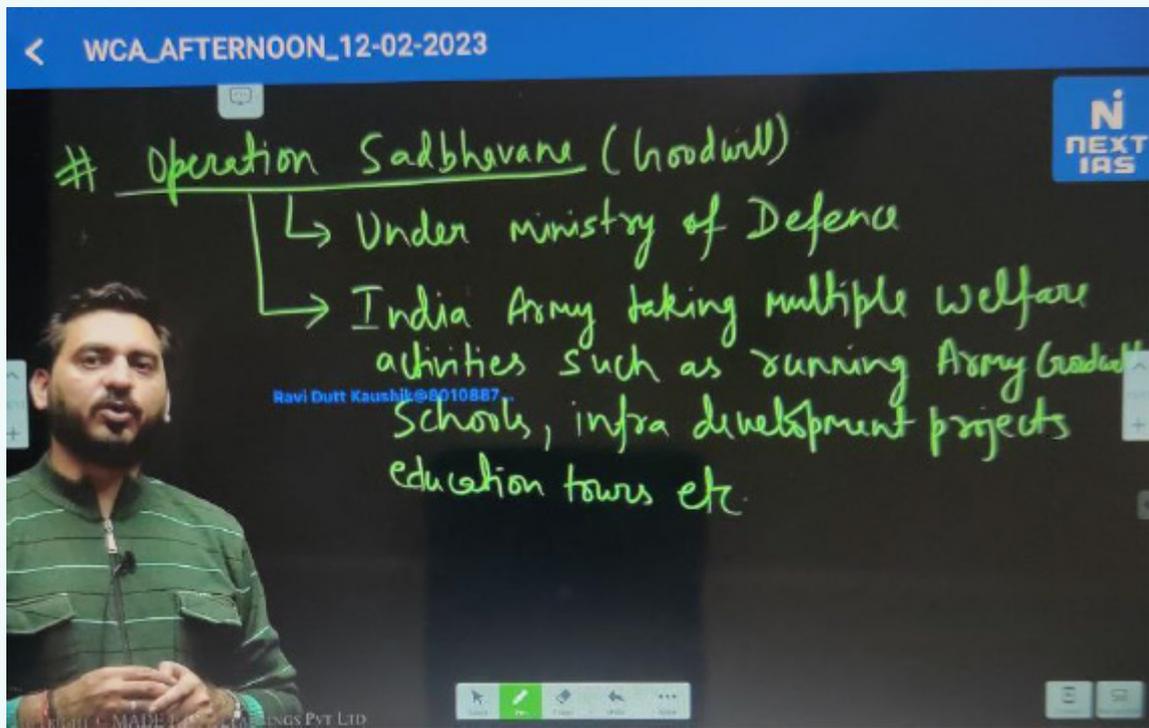
8. Operations undertaken by the Army towards upliftment of the local population in remote areas to include addressing of their basic needs is called:
- (a) Operations Sankalp
  - (b) Operation Maitri
  - (c) Operation Sadbhavana
  - (d) Operation Madad

**Ans. (c)**

**Exp. Option (c) is the correct answer:** Operation Sadbhavana is an initiative by the Indian Army in Jammu and Kashmir and in the North East region to address the basic needs and development requirements of the local population in remote areas. It aims to win the hearts and minds of the people by providing them with essential amenities and infrastructure.

**NEXT IAS GS FOUNDATION CLASS REFERENCE**

**Class Notes\_Weekly Current Affairs**



9. The longest border between any two countries in the world is between:
- (a) Canada and the United States of America
  - (b) Chile and Argentina
  - (c) China and India
  - (d) Kazakhstan and Russian Federation

**Ans. (a)**

**Exp.** The border between the United States and Canada is the longest border between any two countries in the world.

US and Canada - 8,891 kilometers

Argentine and Chile - 5,308 kilometers

India and China - 3488 kilometers

Kazakhstan and Russia - 7,800 kilometers (second longest border in the world)

US and Canada border is also the longest non-militarized and non-fenced border in the world.

10. Which of the following statements about the Ethics Committee in the Lok Sabha are correct?
- 1. Initially it was an ad-hoc Committee.
  - 2. Only a Member of the Lok Sabha can make a complaint relating to unethical conduct of a member of the Lok Sabha.
  - 3. This Committee cannot take up any matter which is sub-judice.
- Select the answer using the code given below:
- (a) 1 and 2 only
  - (b) 2 and 3 only
  - (c) 1 and 3 only
  - (d) 1, 2 and 3

**Ans. (c)**

**Exp. Theme:** Parliament

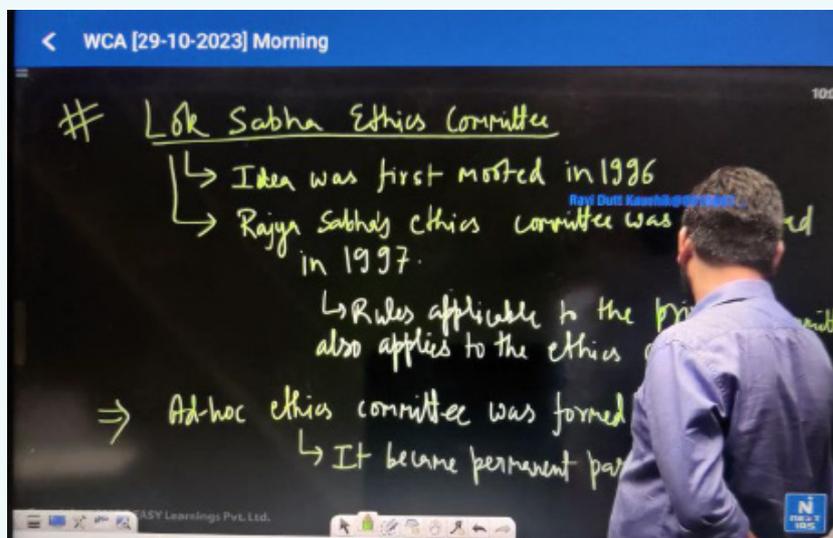
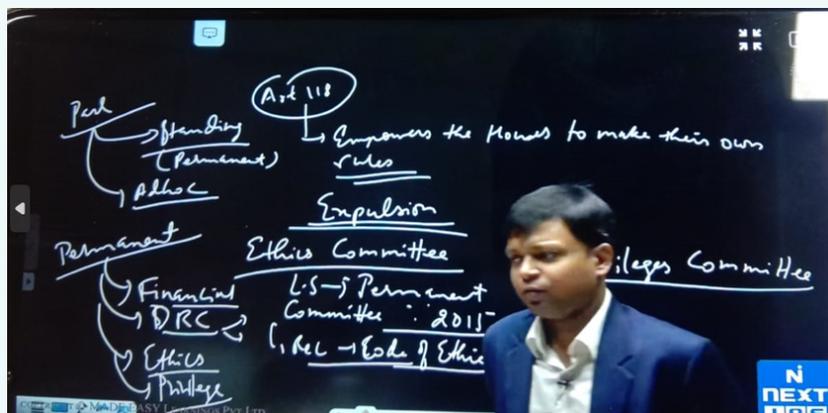
**Statement 1 is correct:** The Committee of Privileges in the Lok Sabha had recommended the constitution of an Ethics Committee during the 13th Lok Sabha. The late Speaker, G M C Balayogi, constituted an ad hoc Ethics Committee in 2000, which became a permanent part of the House only in 2015.

**Statement 2 is incorrect:** Any person can complain against a Member through another Lok Sabha MP, along with evidence of the alleged misconduct, and an affidavit stating that the complaint is not "false, frivolous, or vexatious". If the Member himself complains, the affidavit is not needed. The Speaker can refer to the Committee any complaint against an MP.

**Statement 3 is correct:** The Committee does not entertain complaints based only on media reports or on matters that are sub judice. The Committee makes a prima facie inquiry before deciding to examine a complaint. It makes its recommendations after evaluating the complaint.

**NEXT IAS GS FOUNDATION CLASS REFERENCE**

**Class Notes\_Polity and Weekly Current Affairs**



11. Who was the Provisional President of the Constituent Assembly before Dr. Rajendra Prasad took over?
- (a) C. Rajagopalachari
  - (b) Dr. B.R. Ambedkar
  - (c) T.T. Krishnamachari
  - (d) Dr. Sachchidananda Sinha

**Ans. (d)**

**Exp. Option (d) is the correct answer:**

Sinha was elected to the Constituent Assembly from Bihar on a Congress Party ticket. He served as interim President of the Assembly before Rajendra Prasad was formally appointed as President. Although he did not actively participate in the debates, he submitted important memorandums on tribal issues in Bihar to the Tribal and Excluded and Partially Excluded Areas (other than Assam) Sub-Committee and on the integration of Bihari territory with West Bengal to the President.

12. With reference to the Government of India Act, 1935, consider the following statements:
1. It provided for the establishment of an All India Federation based on the union of the British Indian Provinces and Princely States.
  2. Defence and Foreign Affairs were kept under the control of the federal legislature.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

**Ans. (a)**

**Exp.** The correct answer is (a) 1 only.

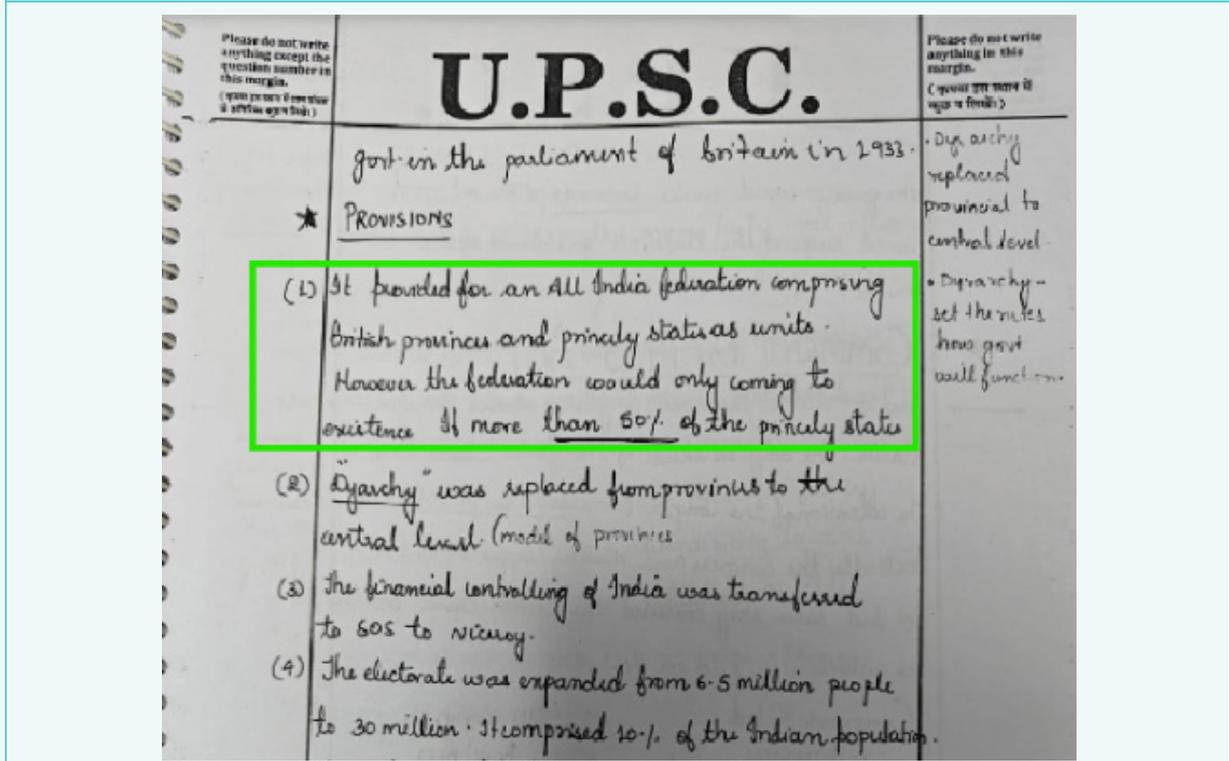
**Statement 1 is correct:** The Government of India Act, 1935, envisioned a federal system for India. This federation aimed to unite the British Indian provinces and princely states under a central government. However, the participation of princely states remained partial and the Act itself wasn't fully implemented.

**Statement 2 is incorrect:** Defence and Foreign Affairs remained under the control of the Viceroy, not the federal legislature established by the Act. These crucial aspects were not delegated to the federal body.

Even though the Act laid the groundwork for an eventual federation, it didn't grant complete autonomy or control over essential matters like defense and foreign policy to the federal legislature.

**NEXT IAS GS FOUNDATION CLASS REFERENCE**

**Class Notes\_History**



13. Which one of the following is a work attributed to playwright Bhasa?
- Kavyalankara
  - Natyashastra
  - Madhyama vyayoga
  - Mahabhashya

**Ans. (c)**

**Exp. Option (c) is correct:** Madhyama Vyayoga refers to a one-act play in Sanskrit. Here's some information about it:

**Authorship:** Traditionally attributed to the playwright Bhasa, though there's debate about the exact timeframe. Some scholars believe Bhasa lived much later than originally thought.

**Genre:** Classified as a Vyayoga, a specific type of Sanskrit drama.

**Plot:** The play revolves around two key points:

A comedic misunderstanding due to a shared name - Bhima, the middle Pandava prince, and the middle son of a priest named Keshav Das.

The reunion of Bhima with his son, Ghatotkacha. This particular event isn't part of the traditional Mahabharata story.

**NEXT IAS GS FOUNDATION CLASS REFERENCE**

**Class Notes\_History**

- Bharata's Natyashastra (200BC-200AD):** First reference to musical theory was discussed.
- Indus Valley Civilization:** Musical instruments seven-holed flute and Ravanahatha.
- Pillars of Indian music:** Swara, Raga and tala.

**SWARA**

- 'Note' or 'scale degree' in a composition.
- Natyashastra, Bharata → twenty-two notes scale. Currently → Hindustani music uses SAPTAK or SARGAM - Sa, re, ga, ma, pa, dha, ni.

Sadaja	Tonic	Sa
Rishabha	Supertonic	Re
Gandhara	Mediant	Ga
Madhyama	Sub-dominant	Ma
Panchama	Dominant	Pa
Dhaivata	Sub-mediast	Dha
Nishada	Subtonic	Ni

- Swara differs from Shruti (smallest gradation of pitch → quality of frequency).
- 22 Shrutis or microtones → 12 are audible (7 Suddha Swaras + 5 Vikrita Swaras).

**RAGA**

Derived from Sanskrit word 'Ranj' to delight or to make happy and satisfy a person form the basis of the melody (tala harmonies the basic of the rhythm)

**TALA**

- Rhythmic group
- Cycles range from
- According to 1
- divided into sin
- time measurem
- music.
- Independent o
- own divisions.
- Laya:** The temp
- the time span.
- Recognized ar**
- jhaptal, Teental

**RASA**

- Emotional resp
- scale
- 8 ra
- uras

Type of R
Shringara
Haasya
Karuna

**SHUNGA DYNASTY (Ancestors belongs to Ujjain )**

Rulers	Important Developments
<b>Pushyamitra</b>	✓ Followed Brahminism and as per some accounts he persecuted Buddhists but no authoritative evidence to this claim
<b>Sunga</b>	✓ Countered attacks from Greek kings i.e. Menander and Demetrius
<b>185 B.C. - 151 B.C</b>	✓ thwarted an attack from the Kalinga king Kharavela ✓ Conquered Vidarbha and renovated Stupas at Sanchi and Bharhut ✓ Also, sculptured stone gateway (Torana) at Sanchi. ✓ <b>Ayodhya Inscription:</b> Performed Ashvamedha Yajna ✓ <b>Patronised the Sanskrit grammarian Patanjali → wrote Mahabhasya</b>

14. Sanghabhuti, an Indian Buddhist monk, who travelled to China at the end of the fourth century AD, was the author of a commentary on:
- Prajnaparamita Sutra
  - Visuddhimagga
  - Sarvastivada Vinaya
  - Lalitavistara

**Ans. (c)**

**Exp. Option (c) is the correct answer:** Sarvastivada Vinaya is the monastic code of the Sarvastivada school, a major branch of Early Buddhism. Historical records credit Sanghabhuti with authoring a commentary on this specific Vinaya text.

**15.** Consider the following properties included in the World Heritage List released by UNESCO:

1. Shantiniketan
2. Rani-ki-Vav
3. Sacred Ensembles of the Hoysalas
4. Mahabodhi Temple Complex at Bodhgaya

How many of the above properties were included in 2023?

- (a) Only one
- (b) Only two
- (c) Only three
- (d) All four

**Ans. (b)**

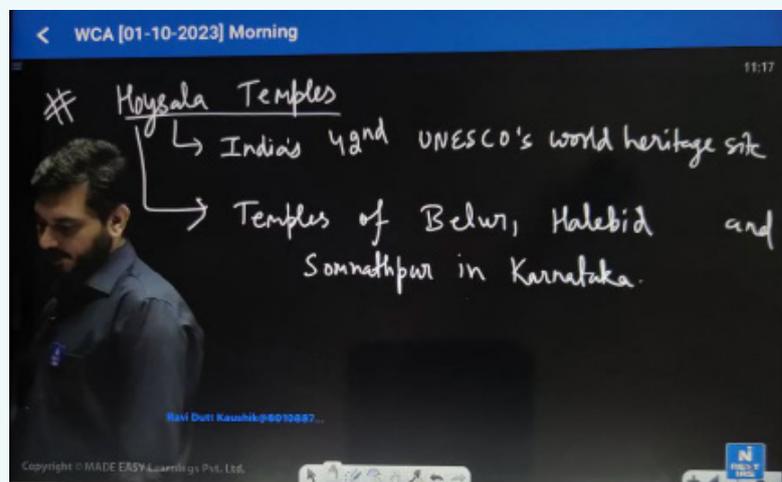
**Exp. Option (b) is correct answer:**

**1. Santiniketan:** Santiniketan, West Bengal has been inscribed on UNESCO's list of World Heritage Sites during the ongoing 45th session of the UNESCO World Heritage Committee in Riyadh, Kingdom of Saudi Arabia on September 17, 2023.

**3. Sacred Ensembles of the Hoysalas:** The Hoysala temples at Belur, Halebid, and Somanathapur in Karnataka were declared as UNESCO World Heritage Sites on September 18, 2023.

#### NEXT IAS GS FOUNDATION CLASS REFERENCE

##### Class Notes\_Weekly Current Affairs



**16.** As per Article 368 of the Constitution of India, the Parliament may amend any provision of the Constitution by way of:

1. Addition
2. Variation
3. Repeal

Select the correct answer using the code given below:

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

**Ans. (d)**

**Exp. Theme:** Amendment to Constitution .

**Explanation:** Article 368 in Constitution of India: Notwithstanding anything in this Constitution, Parliament may in exercise of its constituent power amend by way of **addition, variation or repeal** any provision of this Constitution in accordance with the procedure laid down in this article.

17. Consider the following countries:

1. Italy
2. Japan
3. Nigeria
4. South Korea
5. south Africa

Which of the above countries are frequently mentioned in the media for their low birth rates, or ageing population or declining population?

- (a) 1, 2 and 4
- (b) 1, 3 and 5
- (c) 2 and 4 only
- (d) 3 and 5 only

**Ans. (a)**

**Exp.** Italy, Japan, and South Korea are frequently mentioned in the media due to their low birth rates, aging populations, and/or declining populations.

Italy and Japan are known for having some of the oldest populations in the world, with a high proportion of elderly people and a low fertility rate.

South Korea has seen a rapid decline in birth rates in recent years, leading to concerns about an aging population and a shrinking workforce.

While Nigeria and South Africa face demographic challenges, they are not typically highlighted in the media for low birth rates or aging populations. They are more often associated with rapid population growth and a young population.

**NEXT IAS GS FOUNDATION CLASS REFERENCE**

**Class Notes\_Indian Society**

**NEXT IAS**

18. Which of the following statements are correct in respect of a Money Bill in the Parliament?

1. Article 109 mentions special procedure in respect of Money Bills.
2. A Money Bill shall not be introduced in the Council of States.
3. The Rajya Sabha can either approve the Bill or suggest changes but cannot reject it.
4. Amendments to a Money Bill suggested by the Rajya Sabha have to be accepted by the Lok Sabha.

Select the answer using the code given below:

- (a) 1 and 2 only
- (b) 2 and 3 only
- (c) 1, 2 and 3
- (d) 1, 3 and 4

Ans. (c)

Exp. Theme: Parliament

**Statement 1 and 2 is correct:** As per article 109, Money Bills can only be introduced in the Lok Sabha

- After passage in Lok Sabha, the Bill is sent to the Rajya Sabha (Council of States) for recommendations within 14 days.

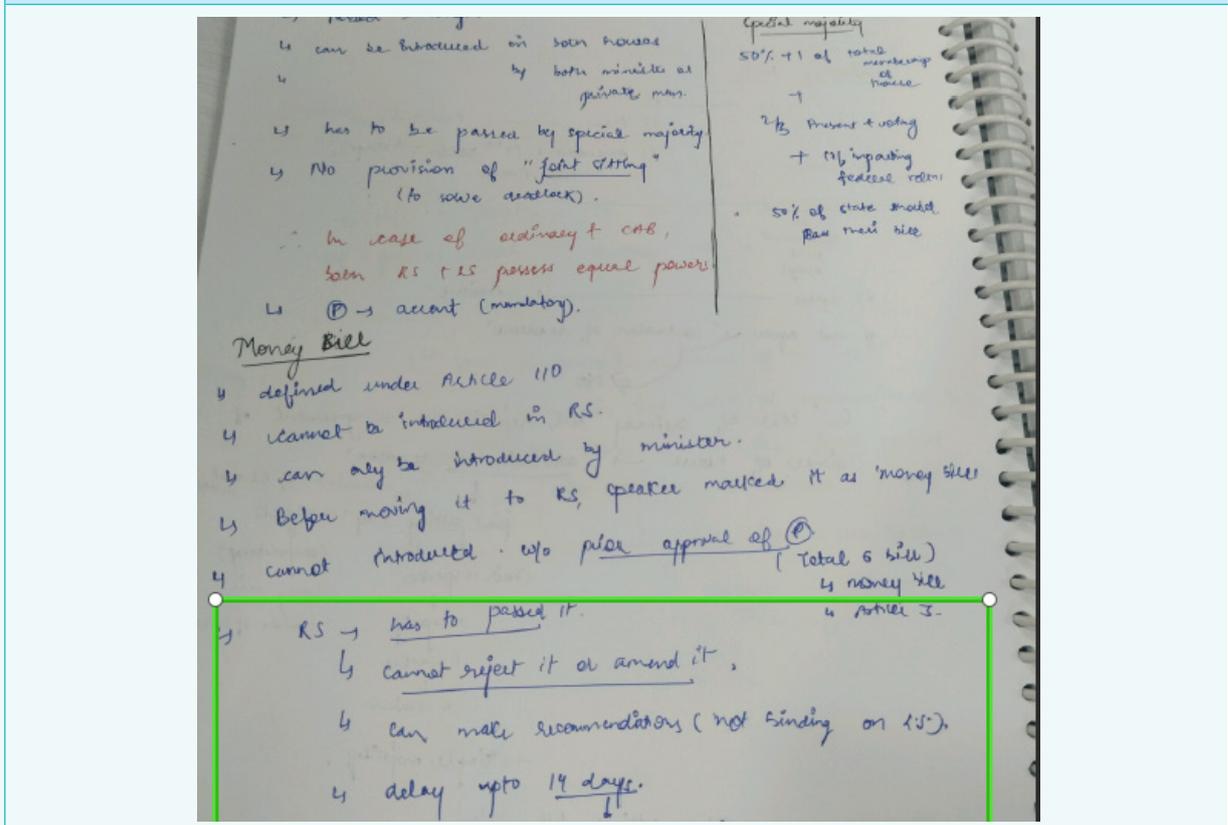
- Rajya Sabha can only make recommendations; it cannot amend the Bill.

**Statement 3 is incorrect:** Lok Sabha can accept or reject Rajya Sabha's recommendations.

**Statement 4 is correct:** If Lok Sabha accepts recommendations, the Bill is deemed passed by both Houses. If Lok Sabha rejects recommendations, the Bill is deemed passed by both Houses in its original form. If Rajya Sabha doesn't return the Bill within 14 days, it is deemed passed by both Houses in its original form. Means Rajya Sabha can not reject the Bill.

**NEXT IAS GS FOUNDATION CLASS REFERENCE**

**Class Notes\_Polity**



19. Which of the following is/are correctly matched in terms of equivalent rank in the three services of Indian Defence forces?

	<b>Army</b>	<b>Airforce</b>	<b>Navy</b>
1.	Brigadier	Air Commodore	Commander
2.	Major General	Air Vice Marshal	Vice Admiral
3.	Major	Squadron Leader	Lieutenant commander
4.	Lieutenant Colonel	Group Captain	Captain

Select the correct answer using the code given below:

- (a) 1 and 4  
(b) 1 and 3  
(c) 2, 3 and 4  
(d) 3 only

**Ans. (d)**

**Exp.** Brigadier (Army) - Air Commodore (Air Force) - Commander (Navy) is not correct. The correct equivalent in the Navy is Commodore.

Major General (Army) - Air Vice Marshal (Air Force) - Vice Admiral (Navy) is not correct. The correct equivalent in the Navy is Rear Admiral.

Major (Army) - Squadron Leader (Air Force) - Lieutenant Commander (Navy) is correct.

Lieutenant Colonel (Army) - Group Captain (Air Force) - Captain (Navy) is not correct. The correct equivalent in the Navy is Commander.

Hence, option (d) is the correct answer.

20. The North Eastern Council (NEC) was established by the North Eastern Council Act, 1971. Subsequent to the amendment of NEC Act in 2002, the Council comprises which of the following members?

- Governor of the Constituent State
- Chief Minister of the Constituent State
- Three Members to be nominated by the President of India
- The Home Minister of India

Select the Correct answer using the code given below:

- (a) 1, 2 and 3 only  
(b) 1, 3 and 4 only  
(c) 2 and 4 only  
(d) 1, 2, 3 and 4

**Ans. (a)**

**Exp. Option (a) is the correct answer:** As per the provisions of the North Eastern Council (Amendment) Act, 2002, the North Eastern Council shall consist of the following members:

- (i) the person or persons for the time being holding the office of the Governor of the States (Hence, 1 is correct)  
(ii) the Chief Ministers of the States of Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland Sikkim and Tripura; (Hence, 2 is correct)  
(iii) three members to be nominated by the President (Hence, 3 is correct)

21. Consider the following statements regarding 'Nari Shakti Vandan Adhiniyam':

- Provisions will come into effect from the 18th Lok Sabha.
- This will be in force for 15 years after becoming an Act.
- There are provisions for the reservation of seats for scheduled Castes Women within the quota reserved for the Scheduled Castes.

Which of the statements given above are correct?

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

**Ans. (c)**

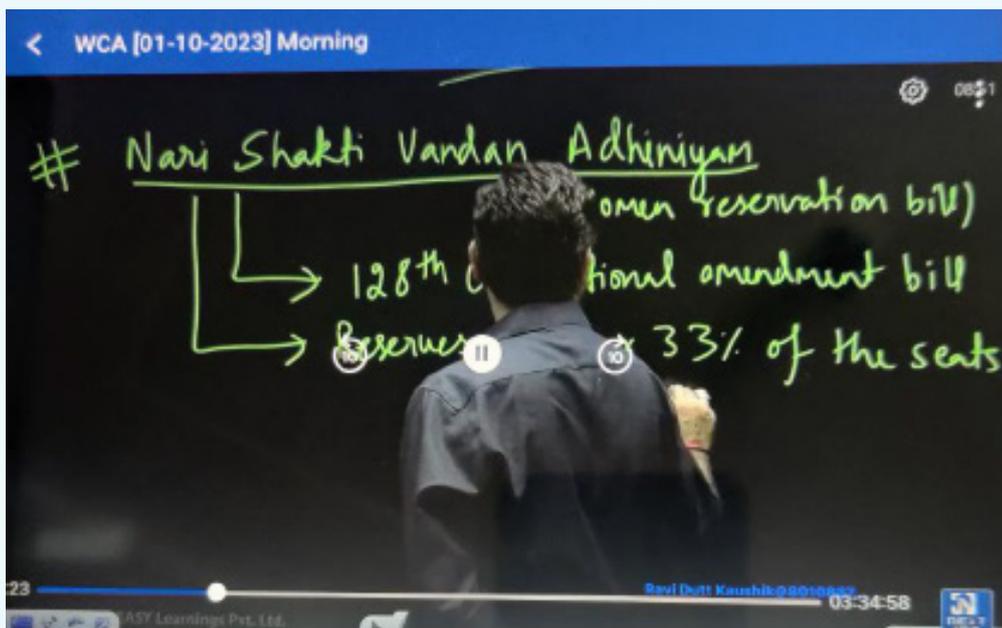
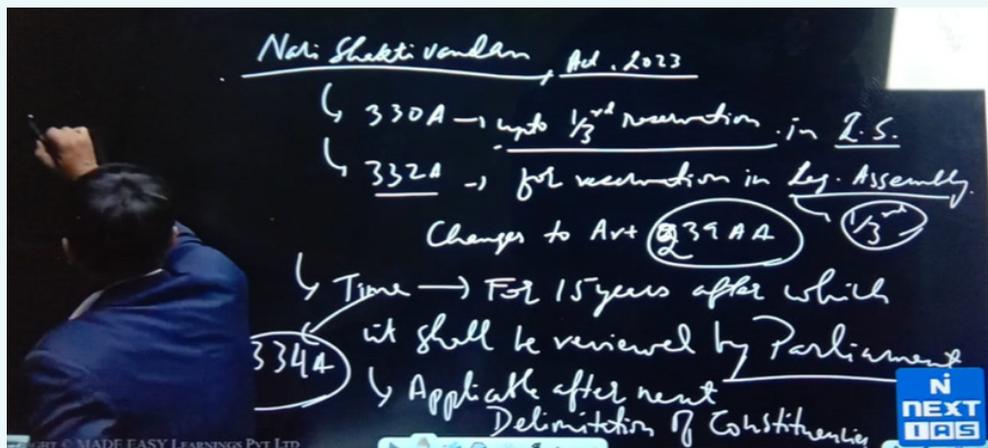
**Exp. Statement 1 is incorrect:** The provisions of the Nari Shakti Vandan Adhiniyam (Women's Reservation Bill) are not linked to a specific Lok Sabha. They come into effect after the bill is passed and becomes an act. [ The reservation will be effective after the census conducted after the commencement of this Bill has been published. Based on the census, delimitation will be undertaken to reserve seats for women.]

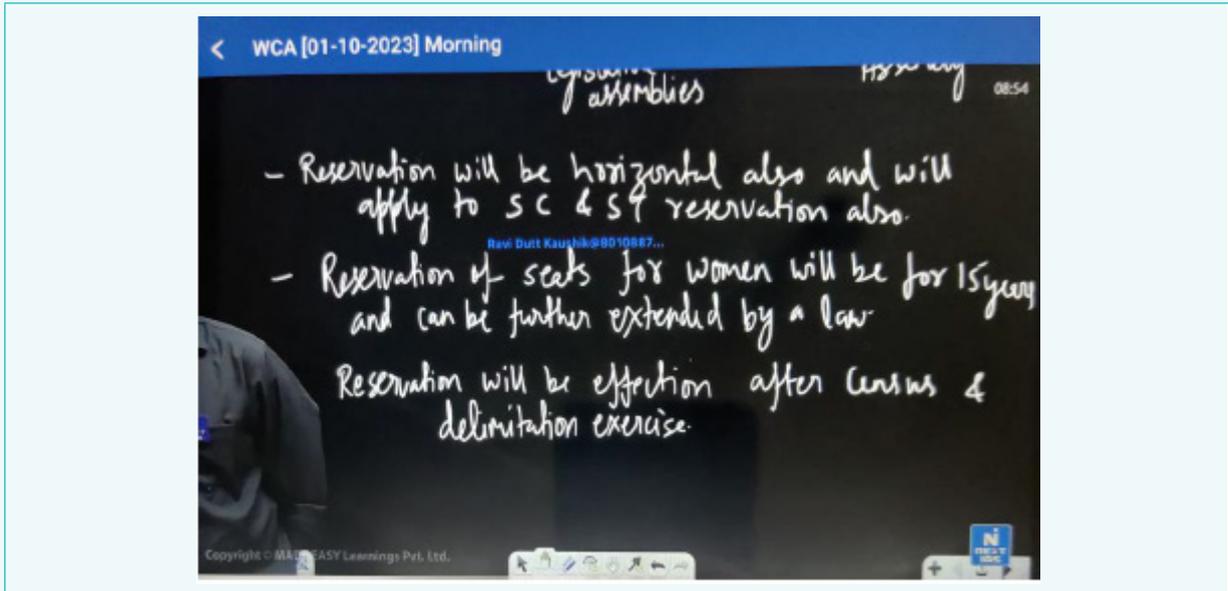
**Statement 2 is correct:** The act is designed to be in force for 15 years after it becomes an act. This is a sunset clause that necessitates a review of the legislation after this period.

**Statement 3 is correct:** The act does include provisions for reserving seats for Scheduled Caste women within the broader quota reserved for Scheduled Castes. This aims to ensure representation for women within this specific marginalized group.

**NEXT IAS GS FOUNDATION CLASS REFERENCE**

**Class Notes\_Polity and Weekly Current Affairs**





22. Which of the following statements about 'Exercise Mitra Shakti-2023' are correct?
1. This was a joint military exercise between India and Bangladesh.
  2. It commenced in Aundh (Pune).
  3. Joint response during counter-terrorism operations was a goal of this operation.
  4. Indian Air Force was a part of this exercise

Select the answer using the code given below:

- (a) 1, 2 and 3
- (b) 1, 2 and 4
- (c) 1, 3 and 4
- (d) 2, 3 and 4

**Ans. (d)**

**Exp. Statement 1 is not correct:** Exercise Mitra Shakti is a joint military exercise between India and Sri Lanka, not Bangladesh.

**Statement 2 is correct:** The exercise did commence in Aundh (Pune).

**Statement 3 is correct:** Joint response during counter-terrorism operations was one of the goals of this exercise.

**Statement 4 is correct:** The Indian Air Force participated in this exercise.

23. A Writ of Prohibition is an order issued by the Supreme Court or High Courts to:
- (a) a government officer prohibiting him from taking a particular action.
  - (b) the parliament/Legislative Assembly to pass a law on Prohibition.
  - (c) the lower court prohibiting continuation of proceedings in a case
  - (d) the Government prohibiting it from following an unconstitutional policy

**Ans. (c)**

**Exp. Theme:** Judiciary.

**Statement 1 is incorrect:** A Writ of Prohibition specifically targets judicial or quasi-judicial bodies, not individual government officers.

**Statement 2 is incorrect:** The writ does not direct legislative bodies to pass laws.

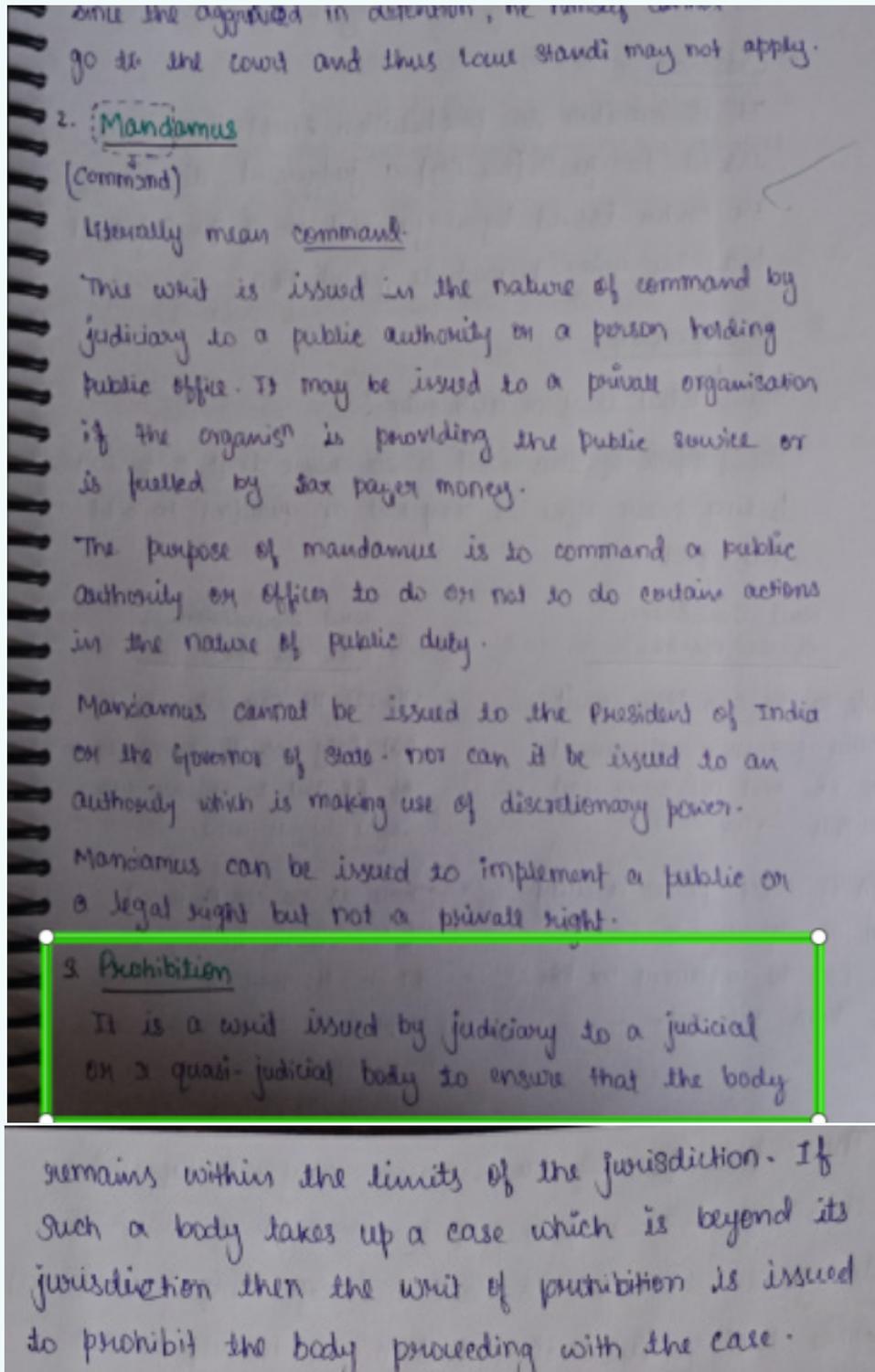
**Statement 3 is correct:** The Supreme Court and any High Court of India can issue a prohibition writ under Article 32 and Article 226 of the Constitution of India respectively. Writ of Prohibition is issued by a higher court to a lower court or tribunal to prevent the latter from exceeding its jurisdiction or usurping a jurisdiction that it does

not possess. This writ can be issued only against judicial and quasi-judicial authorities. It is not available against administrative authorities, legislative bodies, and private individuals or bodies.

**Statement 4 is incorrect:** The writ is not used to direct the government regarding policies; instead, other writs like Mandamus or Certiorari might be used for such purposes.

**NEXT IAS GS FOUNDATION CLASS REFERENCE**

**Class Notes\_Polity**



24. Consider the following statements:

1. It is the Governor of the State who recognizes and declares any community of that State as a Scheduled Tribe.
2. A community declared as a Scheduled Tribe in a State need not be so in another State.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

**Ans. (b)**

**Exp. Theme:** SC/ST:

Explanation The Constitution of India in Article 366 (25) prescribe that the Scheduled Tribes means such tribes or tribal communities as are deemed under Article 342 of the Constitution to be Scheduled Tribes.

**Statement 1 is incorrect:** 342(1) Scheduled Tribes - the **President may** with respect to any State or Union Territory, and where it is a State, after consultation with the Governor thereof, by a public notification, specify the tribes or tribal communities or part of or groups within tribes or tribal communities as Scheduled Tribe in relation to that State or Union Territory as the case may be.

(2) Parliament may by law include in or exclude from the list of Scheduled Tribes specified in a notification issued under clause (1) any tribe or tribal community or part of or group within any tribe or tribal community, but save as aforesaid a notification issued under the said clause shall not be varied by any subsequent notification.

**Statement 2 is correct :** The list of Scheduled Tribes is State/UT specific and a community declared as a Scheduled Tribe in a State need not be so in another State.

25. With reference to Union Budget, consider the following statements:

1. The Union Finance Minister on behalf of the Prime Minister lays the Annual Financial Statement before both the House of Parliament.
2. At the Union level, no demand for a grant can be made except on the recommendation of the President of India.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

**Ans. (b)**

**Exp. Theme:** Union Budget.

**Explanation:** The Union Budget of India, also known as the Annual Financial Statement, is a comprehensive statement of the government's finances, including its revenue and expenditure for a particular fiscal year. The process and requirements related to the Union Budget are enshrined in the Constitution of India.

**Statement 1 is incorrect:** The Constitution of India contains the following provisions with regard to the enactment of Annual Financial Statement:

(1) The President shall in respect of every financial year cause to be laid before both the Houses of Parliament a statement of estimated receipts and expenditure of the Government of India for that year.

**Statement 2 is correct:** No demand for a grant shall be made except on the recommendation of the President.

26. Who of the following is the author of the books "The India Way" and "Why Bharat Matters"?

- (a) Bhupender Yadav
- (b) Nalin Mehta
- (c) Shashi Tharoor
- (d) Subrahmanyam Jaishankar

**Ans. (d)**

**Exp.** Dr. Jaishankar, renowned for his earlier release, “The India Way” (2020), continues to captivate audiences with his new book that picks up from where the first left off-why India is a civilisational power and its engagement with global forces and powers.

27. Consider the following pairs:

	Country	Reason for being in the news
1.	Argentina	Worst economic crisis
2.	Sudan	War between the country’s regular army and paramilitary forces
3.	Turkey	Rescinded its membership of NATO

How many of the pairs given above are correctly matched?

- (a) Only one pair
- (b) Only two pairs
- (c) All three pairs
- (d) None of the pairs

**Ans. (b)**

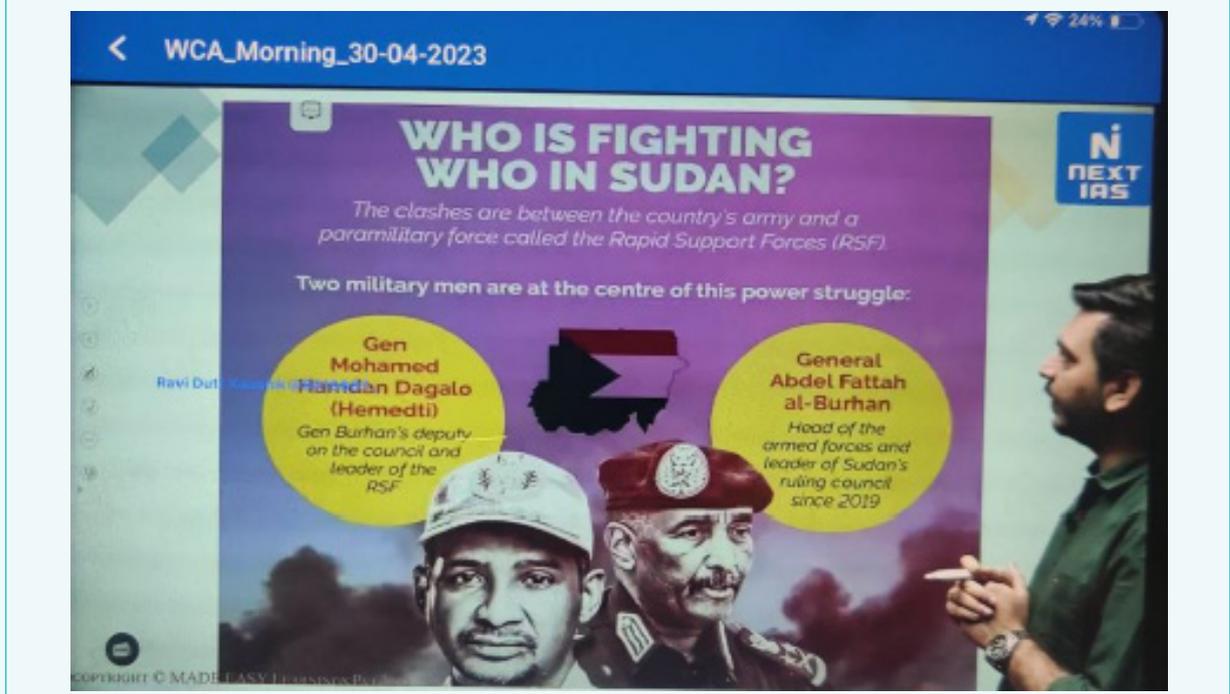
**Exp. Argentina:** Argentina has been experiencing a severe economic crisis, including high inflation, debt, and poverty. (Hence, Pair 1 is correct)

**Sudan:** It has been in the news due to the ongoing conflict between the Sudanese Armed Forces (SAF) and the Rapid Support Forces (RSF) paramilitary group.

**Turkey:** Turkey has not rescinded its membership in NATO.

**NEXT IAS GS FOUNDATION CLASS REFERENCE**

**Class Notes\_Weekly Current Affairs**



28. Consider the following statements:

Statement-I

Sumed pipeline is a strategic route for Persian Gulf oil and natural gas shipments to Europe.

Statement-II

Sumed pipeline connects the Red Sea with the Mediterranean Sea.

Which one of the following is correct in respect of the above statements?

- (a) Both Statement-I and Statement-II are correct and Statement-II explains Statement-I
- (b) Both Statement-I and Statement-II are correct, but Statement-II does not explain Statement-I
- (c) Statement-I is correct, but Statement-II is incorrect
- (d) Statement-I is incorrect, but Statement-II is correct

**Ans. (a)**

**Exp. Statement I is correct:** The Sumed pipeline (Suez-Mediterranean pipeline) is indeed a strategic route for transporting crude oil from the Persian Gulf region to Europe. It bypasses the Suez Canal, offering a shorter and more efficient route.

**Statement II is correct:** The Sumed pipeline does connect the Red Sea (at Ain Sukhna) to the Mediterranean Sea (at Sidi Kerir). This geographical connection is what makes it a crucial alternative route for oil shipments, thus explaining the strategic importance mentioned in Statement I.

**29.** Consider the following statements:

- 1. The Red Sea receives very little precipitation in any form.
- 2. No water enters the Red Sea from rivers.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

**Ans. (c)**

**Exp. Statement 1 is correct:**

The Red Sea extends from Suez, Egypt, southward for about 1,200 miles (1,930 kilometers) to the strait of Bab el-Mandeb. The climate is of monsoon type but with greater dryness due to the sea's location between the deserts of North Africa and the Arabian Peninsula. The Red Sea region thus receives very little precipitation in any form,

**Statement 2 is correct:**

No major rivers drain into the Red Sea, so it does not receive significant inflows of freshwater from rivers. Although occasional streams may contribute water, the amount they add is minimal. Additionally, the region experiences very little precipitation, making the water from these streams even more insignificant.

**Both Statement 1 and 2 are correct, hence Option C is correct answer**

**30.** According to the Environmental Protection Agency (EPA), which one of the following is the largest source of Sulphur dioxide emissions?

- (a) Locomotives using fossil fuels
- (b) Ships using fossil fuels
- (c) Extraction of metals from ores
- (d) Power plants using fossil fuels.

**Ans. (d)**

**Exp.** According to Environment Protection Agency, The largest source of SO<sub>2</sub> in the atmosphere is the burning of fossil fuels by power plants and other industrial facilities.

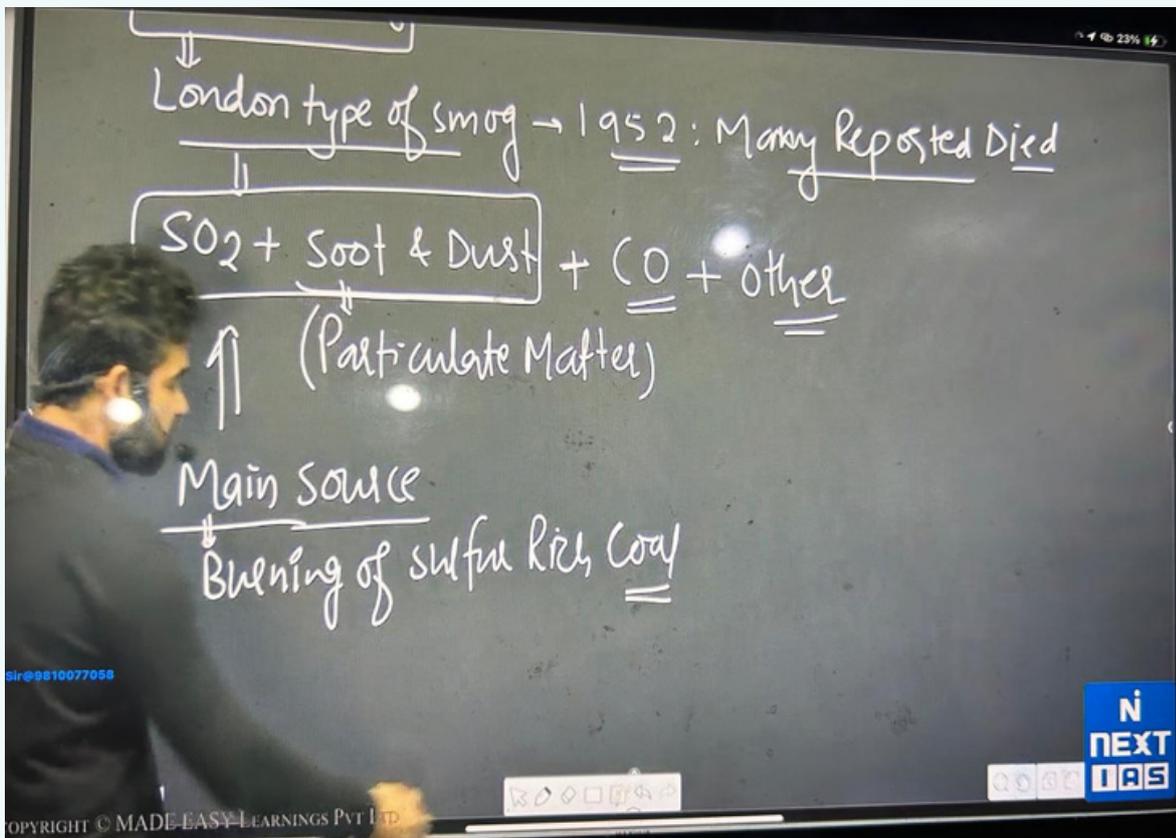
Smaller sources of SO<sub>2</sub> emissions include:

industrial processes such as extracting metal from ore;

natural sources such as volcanoes; and locomotives, ships and other vehicles and heavy equipment that burn fuel with a high sulfur content.

**NEXT IAS GS FOUNDATION CLASS REFERENCE**

**Class Notes\_Environment**



31. Consider the following statements:

**Statement-I:**

If the United States of America (USA) were to default on its debt, holders of US Treasury Bonds will not be able to exercise their claims to receive payment.

**Statement-II:**

The USA Government debt is not backed by any hard assets, but only by the faith of the Government

Which one of the following is correct in respect of the above statements?

- (a) Both Statement-I and Statement-II are correct and Statement-II explains Statement-I
- (b) Both Statement-I and Statement-II are correct, but Statement-II does not explain Statement-I
- (c) Statement-I is correct, but Statement-II is incorrect
- (d) Statement-I is incorrect, but Statement-II is correct

**Ans. (d)**

**Exp. Statement 1 is not correct:** If the Treasury Department wants to change the date it repays investors, it would need to notify Fedwire the day before a payment is due, so investors would know the government was about to default the night before it happened.

USA treasury bond holder can put litigation against the U.S. government for missed payments. (The first thing to know is that T-bills and U.S. bonds don't come with complicated purchase agreements. U.S. debt is sold under the full faith and credit of the government as a simple obligation to pay)

**Statement 2 is correct:** The federal government borrows money from the public by issuing securities—bills, notes, and bonds—through the Treasury. Treasury securities are attractive to investors because they are:

1. Backed by the full faith and credit of the United States government
2. Offered in a wide range of maturities

32. Consider the following statements:

**Statement-I:**

Syndicated lending spreads the risk of borrower default across multiple lenders.

**Statement-II:**

The syndicated loan can be fixed amount/lump sum of funds, but cannot be a credit line

Which one of the following is correct in respect of the above statements?

- (a) Both Statement-I and Statement-II are correct and Statement-II explains Statement-I
- (b) Both Statement-I and Statement-II are correct, but Statement-II does not explain Statement-I
- (c) Statement-I is correct, but Statement-II incorrect
- (d) Statement-I is incorrect, but Statement-II is correct

**Ans. (c)**

**Exp.** Syndicated lending primarily aims to distribute the risk of a borrower default across numerous lenders, banks, or institutional investors, such as pension funds and hedge funds. Syndicated loans are also employed in the leveraged buyout market to support significant business deals.

**Statement 1 is correct:** Syndicating allows lenders to spread risk and take part in financial opportunities that may be too large for their individual capital base.

**Statement 2 is not correct:** Lenders are referred to as a syndicate, which works together to provide funds for a single borrower. The borrower can be a corporation, a large project, or a sovereign government. The loan can involve a fixed amount of funds, a credit line, or a combination of the two.

33. Consider the following statements in respect of the digital rupee:

- 1. It is a sovereign currency issued by the Reserve Bank of India RBI alignment with its monetary policy.
- 2. It appears as a liability on the RBI's balance sheet.
- 3. It is insured against inflation by its very design.
- 4. It is freely convertible against commercial bank money and cash.

Which of the statements given above are correct?

- (a) 1 and 2 only
- (b) 1 and 3 only
- (c) 2 and 4 only
- (d) 1, 2 and 4

**Ans. (d)**

**Exp.** Digital currency refers to any currency that is available in electronic form. The Digital Rupee is virtual money, serving the same purpose as physical money. It is a form of digital currency issued by the Reserve Bank of India (RBI), the country's central bank. The Digital Rupee is a centralized digital currency directly regulated by the RBI, maintaining the stability and trust associated with traditional currencies.

**Statement 1 is correct:** Reserve Bank broadly defines CBDC as the legal tender issued by a central bank in a digital form. It is akin to sovereign paper currency but takes a different form, exchangeable at par with the existing currency and shall be accepted as a medium of payment, legal tender and a safe store of value.

**Statement 2 is correct:** Digital Currency would appear as liability on a central bank's balance sheet.

**Statement 3 is not correct:** It has no link with its issuance with the inflation in india.

**Statement 4 is correct:** The features of digital currency include:

CBDC is sovereign currency issued by Central Banks in alignment with their monetary policy

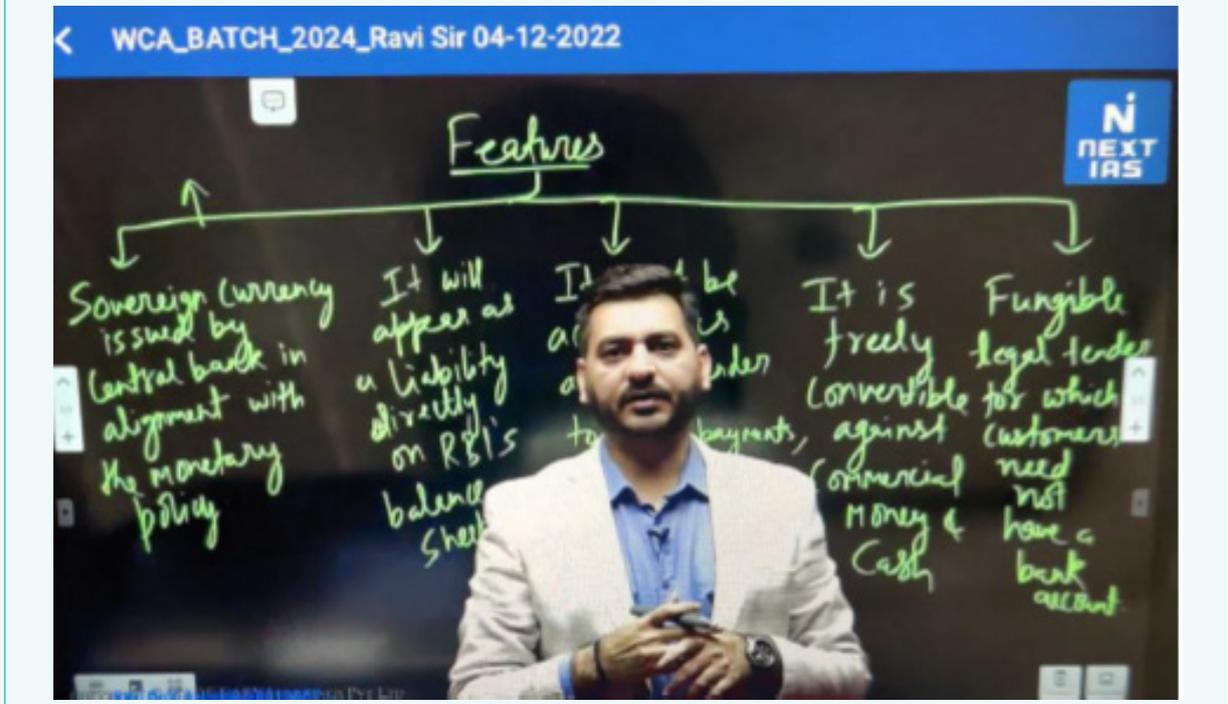
It appears as a liability on the central bank's balance sheet

Must be accepted as a medium of payment, legal tender, and a safe store of value by all citizens, enterprises, and government agencies.

Freely convertible against commercial bank money and cash  
Fungible legal tender for which holders need not have a bank account  
Expected to lower the cost of issuance of money and transactions

**NEXT IAS GS FOUNDATION CLASS REFERENCE**

**Class Notes\_Weekly Current Affairs**



34. With reference to ancient India, Gautama Buddha was generally known by which of the following epithets?

1. Nayaputta
2. Shakyamuni
3. Tathagata

Select the correct answer using the code given below:

- (a) 1 only
- (b) 2 and 3 only
- (c) 1, 2 and 3
- (d) None of the above are epithets of Gautama Buddha

**Ans. (b)**

**Exp.** The correct answer is Option (B) 2 and 3 only.

**Nayaputta (1):** This term is not a common epithet used for Gautama Buddha.

**Shakyamuni (2):** This refers to the Buddha's origin. "Shakya" signifies his clan, and "muni" translates to "sage" or "saint." So, Shakyamuni literally means "sage of the Shakya clan."

**Tathagata (3):** This is a prominent epithet for Gautama Buddha. It has multiple interpretations, including "Thus Gone" or "Thus Come," signifying his enlightened state and unique path.

Therefore, only options (2) and (3) - Shakyamuni and Tathagata - are epithets specifically associated with Gautama Buddha.

**NEXT IAS GS FOUNDATION CLASS REFERENCE**

**Class Notes\_History**

<b>RIGHT FOLD PATH (Theme of 1<sup>st</sup> Sermon)</b>	misconduct. 4. Abstention from falsehood. 5. Abstention from intoxication	of prohibited crimes <b>Women were also allowed to join Sangha</b>
Right view Right intention Right action Right livelihood	2. Right effort 4. Right speech 6. Right mindfulness 8. Right concentration	
<b>UTAMA BUDDHA (563 BC-483 BC)</b>	<b>4 Noble Truths (ARYA SATYA)</b>	
Known as <u>Siddharta, Sakyamuni &amp; Tathagata</u> Belong to Sakya Clan ; <b>Birth Place:</b> Lumbini <b>Father:</b> Suddhodana ; <b>Mother:</b> Mayadevi <b>Teachers:</b> Alarakamam and Rudrak Ramputta <b>Enlightenment:</b> Under Pipal tree at Uruvela (Bodhi dhgaya) on banks of river Niranjana (Falgu). <b>Sermon :</b> Sarnath (Deer park) to 5 disciples including Mahakasyapa (first disciple) <b>Attained Nirvana:</b> At Kushinagar at age of 80	1. World is full of misery (Sabbam Dukkham) 2. Desire is root cause of sorrow ( <b>Pratitya Samputpada-Dwadash Nidan</b> ) 3. Desire can be conquered (DukhaNirodha) 4. Desire can be conquered by following Astangika marga.	

35. In which of the above rows is the given information correctly matched?

	<b>Archaeological</b>	<b>State</b>	<b>Description</b>
1.	Chandraketugarh	Odisha	Trading Port town
2.	Inamgaon	Maharashtra	Chalcolithic
3.	Mangadu	Kerala	Megalithic
4.	Salihundum	Andhra Pradesh	Rock-cut shrine

- (a) 1 and 2  
(b) 2 and 3  
(c) 3 and 4  
(d) 1 and 4

**Ans. (b)**

**Exp. Chandraketugarh (West Bengal):** Chandraketugarh is actually an ancient trading town located in West Bengal.

**Inamgaon (Maharashtra):** This is a correct match. Inamgaon in Maharashtra is a well-known Chalcolithic site.

**Mangadu (Kerala):** This is a correct match. Mangadu in Kerala is famous for its Megalithic burial structures.

**Salihundam (Andhra Pradesh):** This is an incorrect match. Salihundam in Andhra Pradesh is known for its Buddhist shrines, not rock-cut caves.

**NEXT IAS GS FOUNDATION CLASS REFERENCE**

**Class Notes\_History**

**IMPORTANT CHALCOLITHIC SITES**

<b>Ahar -Banas (Rajasthan)</b>	Smelting & metallurgy, Supplied copper tools to contemporary communities , Rice evidence , Black red Pottery with White designs
<b>Gilund (Rajasthan)</b>	Stone blade industry was discovered here
<b>Navdatoli (MP)</b>	Narmada River,Cultivated almost all food grains ,Round and Rectangular residential structures
<b>Malwa (MP)</b>	Narmada River, Richest chalcolithic ceramics, and spindle whorls
<b>Kayatha (MP)</b>	Chambal River, Houses had mud-plastered floors, Pre-Harappan elements in pottery and copper objects with sharp cutting edges.
<b>Daimabad (Maharashtra)</b>	Southern extension of IVC , largest Jorwe culture site in Godavari valley, Famous for recovery of bronze goods i.e. bronze rhinoceros, elephant, 2-wheeled chariot with a rider and a buffalo
<b>Songaon, Inamgaon &amp; Nasik (Maharashtra)</b>	Large mud houses with ovens and circular pit houses Dead under the floor of houses in North and South direction
<b>Nevasa (Jorwe, Maharashtra) and Eran (MP):</b> Known for Non-Harappan culture.	

36. Who of the following rulers of medieval India gave permission to the Portuguese to build a fort at Bhatkal?
- Krishnadevaraya
  - Narasimha Saluva
  - Muhammad Shah III
  - Yusuf Adil Shah

**Ans. (a)**

**Exp. Option (a) is the correct answer:** Krishnadevaraya, the ruler of the Vijayanagara Empire, allowed the Portuguese to build a fort at Bhatkal in 1510. He maintained friendly relations with the Portuguese.

37. With reference to revenue collection by Cornwallis, statements: consider the following
- Under the Ryotwari Settlement of revenue collection, the peasants were exempted from revenue payment in case of had harvests or natural calamities.
  - Under the Permanent Settlement in Bengal, if the Zamindar failed to pay his revenues to the state, on or before the fixed date, he would be removed from his Zamindari.

Which of the statements given above is/are correct?

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

**Ans. (b)**

**Exp. Statement 1 is incorrect:** The Ryotwari Settlement, introduced later by Thomas Munro, fixed land revenue directly with peasants (ryots).

**Statement 2 is correct:** The Permanent Settlement, introduced by Cornwallis, fixed the land revenue amount with zamindars permanently. If a zamindar failed to pay the fixed amount on time, the British could seize their zamindari through sale. In fact, according to the Sunset Law, if payment did not come in by sunset of the specified date, the zamindari was liable to be auctioned.

Therefore, only statement 2 reflects a feature of the Permanent Settlement implemented by Cornwallis.

**NEXT IAS GS FOUNDATION CLASS REFERENCE**

**Class Notes\_History**

It was introduced by Cornwallis on the advice of John Shore in 1783 in Bengal, Bihar, Odisha and upto Banaras division of UP. It covered 19% of British India.

Reasons for its introduction -

1. A group of historians believe that Cornwallis did a mistake in identifying zamindars as the owners of the land. Another group of historians believe that Cornwallis did it deliberately to create the concept of private property in land.
2. He wanted to create a social class of zamindars who would be loyal to the company in future.
3. It would be easy for the company to collect revenue from few zamindars rather than millions of peasants.
4. The company expected that per settlement could lead to surplus agricultural production. As the company could not demand a share in the surplus production.

14/09/22

Characteristic Features -

1. The settlement was introduced with the zamindars, considering them as owners of those land in which they had previously been revenue collectors. Therefore it is known as zamindari settlement.
2. Their right of ownership was hereditary. They could sell, transfer or even mortgage their lands.
3. By the evening of an already pre-determined date the zamindars must pay their dues or else they would lose their ownership. ∴ it is known as sunset law.
4. The company / the state could not claim any amount above then what had already been fixed.
5. The zamindars must had to pay 10/11<sup>th</sup> of the rental to the company, keeping 1/11<sup>th</sup> part with themselves.

$$m = z_1 + z_2 + z_3 \dots \dots z_n$$

$$C = \frac{10}{11} \times \text{Rental w.r.to Base Year} \quad \text{say, } z = 11000$$

$$C = \frac{10}{11} \times 11000 = 10,000 \quad \text{In } 1797 = 10,000$$

[Zamindar will keep = 1000]

$$C_{1797} = \frac{10}{11} \times 11000 = 10,000$$

[Company wanted fix amt, If it is more than the rental Zamindar will keep in pocket and if less zamindar have to pay from their pocket].

Reed in Madras, covering <sup>comprising</sup> 51% of British India. Bihar and parts of Assam. It covered 51% of British India.

Characteristic Features -

This settlement was made directly with the peasants considering them as the owners of the land

1. This settlement was introduced with the peasants who were known as Ryots and thus the system came to be known as Ryotwari.
2. The peasants were issued 'Patta', and ownership document which recognized Peasants or Ryots as owners.
3. The rate of revenue was excessively high and in certain areas like in Madras it went upto 50% of the standard production.
4. The rate of revenue was not fixed forever but could be revised after 20-30 years.
5. The company retained the right to increase the revenue during revision. PS: 19% and RS: 51%. The remaining 30% is Mahalium.

38. Consider the following statements:
1. There are parables in Upanishads.
  2. Upanishads were composed earlier than the Puranas
- Which of the statements given above is/are correct?
- (a) 1 only  
(b) 2 only  
(c) Both 1 and 2  
(d) Neither 1 nor 2

**Ans. (b)**

**Exp.** The correct answer is (B) 2 only.

**Upanishads contain Parables:** The Upanishads are known to use parables and stories to explain complex philosophical concepts. A famous example is the parable of the two birds in the Mundaka Upanishad, which illustrates the relationship between the individual self (Atman) and the universal self (Brahman).

**Upanishads Predate Puranas:** The Upanishads are generally dated to be composed between 800 BCE and 400 BCE, while the Puranas are considered much later works, ranging from 300 BCE to 1300 CE.

Therefore, statement 1 is incorrect because Upanishads do contain parables, and statement 2 is correct because Upanishads were composed earlier than the Puranas.

**NEXT IAS GS FOUNDATION CLASS REFERENCE**

**Class Notes\_History**

<b>Upanishads</b>	<ul style="list-style-type: none"> <li>✓ <b>Literal meaning:</b> "sit near someone". Introduces the concept of Atman and Brahman. 108 Upanishads are source of absolute knowledge.</li> <li>✓ <b>Mundaka Upanishada:</b> Source of Satyamev Jayate</li> <li>✓ <b>Chhandogya Upanishada :</b> <ul style="list-style-type: none"> <li>▪ <b>First 3 ashrams</b> and discusses the (mainly two) types of marriage: <b>Anuloma Marriage</b> –Man marrying in his own varna or below <b>Pratiloma marriage</b> – Woman Marrying in a lower varna not sanctioned by the Vedas.</li> <li>▪ Legend of Satyakam Jabal(stigma of being an unmarried mother)</li> </ul> </li> <li>✓ <b>Brihadarnayaka Upanishada :</b> Tamsoma Jyotirgamaya</li> <li>✓ <b>Shevetashvatara ( Yajurveda ) :</b> literal meaning is carried on White Horse</li> <li>✓ <b>Kathopanishada :</b> Discussion between Yama and Nachiketa(12 years Boy)</li> </ul>
<b>6 Vedanga</b>  Limbs of the Vedas	<ul style="list-style-type: none"> <li>✓ Supportive in the study of the Vedas and the Vedic traditions</li> <li><b>1. Shiksha (Phonetics) 2. Jyotisha (Astronomy) 3. Vyakaran (grammar)</b></li> <li><b>4. Nirukta (Etymology) 5. Chhanda (Metrics) 6. Kalpa (Ceremonies)</b></li> <li>✓ Kalpa Sutra is further divided into:</li> <li><b>Shrauta Sutra:</b> Rules for the performance of different types of sacrifices, Rituals.</li> <li><b>Grihya Sutra :</b> Domestic sacrifices i.e. Upanayana , marriage, funerary practices</li> <li><b>Dharmasutra:</b> pertaining to the rituals Dharma.</li> </ul>
<b>18 Puranas</b> literally means 'ancient' or 'old'	<ul style="list-style-type: none"> <li>✓ Post /Vedic text and believed to be composed by Ved Vyasa</li> <li>✓ Puranas are sectarian i.e devoted to Shiva, Vishnu and Brahma</li> <li>✓ Discusses 5 subjects in the of 4 Yugas (Satya, Treta, Dvapara, and Kali): <ul style="list-style-type: none"> <li>▪ <b>Sarga</b> – Primary creation of the universe.</li> <li>▪ <b>Pratisarga</b> – Recreation after annihilation.</li> <li>▪ <b>Manvantaras</b> – the reigns of the various Manus.</li> <li>▪ <b>Vamsha</b> – the genealogy of gods and rishis.</li> <li>▪ <b>Vamshanucharita :</b> History of Suryavanshis and Chandravanshis</li> </ul> </li> <li>✓ 4 Yuga = Mahayuga → 1000 Mahayuga = 1 Kalpa (divided into 14 Manvantaras →each led by Manu , 1<sup>st</sup> Manu (Mind Son of Brahma) is Swayambhu</li> </ul>
<b>Dharma Shastra</b>	<ul style="list-style-type: none"> <li>✓ Sanskrit texts about morality , duty and divided into Dharmasutras</li> <li>✓ Refers to Purusharthas (life goals) i.e. Dharma (right conduct), Artha (material wellbeing), Kama (desires, sensual pleasures) and Moksha (liberation from the cycle of life and death)</li> <li>✓ Person's dharma was dependent on gender, marital status, Varna and ashram</li> </ul>
<b>Epics</b>	<p><b>Mahabharata(war in Dvapara):</b> Composed by Vedvyasa ,18 Parvas -1 lakh verses i.e. Shatashahshri (Jayasanhita) and name of Dwija shreshtha (Kuninda King )</p> <p><b>Ramayana(War in Treta):</b> Composed by Valmiki and consists of seven Kandas (books) having 24,000 verses More idealistic</p>

39. Consider the following statements:

1. India is a member of the International Grains Council.
2. A country needs to be a member of the International Grains Council for exporting or importing rice and wheat.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

**Ans. (a)**

**Exp. Statement 1 is correct:** India is a member of the International Grains Council (IGC). The IGC is an intergovernmental organization that seeks to further international cooperation in grains trade. India has been a member of the IGC.

**Statement 2 is not correct:** Membership in the International Grains Council is not a prerequisite for a country to export or import rice and wheat. Countries can trade these grains without being members of the IGC.

Hence, the answer is (a)

40. Which one of the following was the latest inclusion in the Intangible Cultural Heritage List of UNESCO?

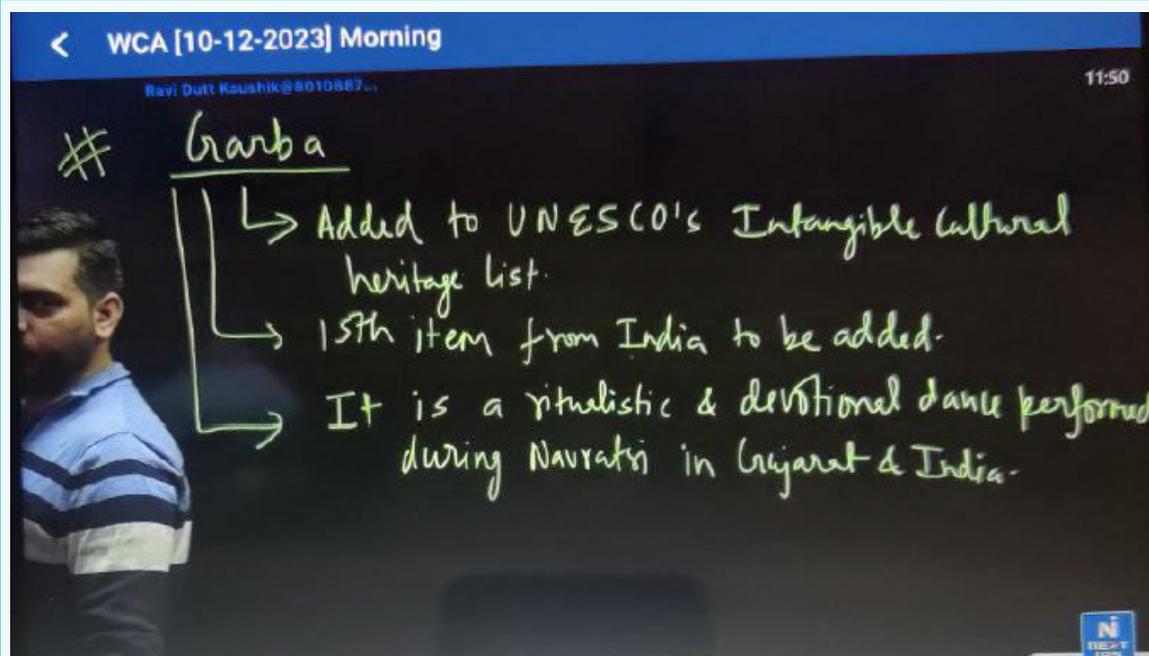
- (a) Chhau dance
- (b) Durga puja
- (c) Garba dance
- (d) Kumbh mela

**Ans. (c)**

**Exp. Option (c) is the correct answer:** Garba of Gujarat was recently inscribed on the UNESCO Representative List of the Intangible Cultural Heritage of Humanity. A ritualistic and devotional dance performed throughout the State of Gujarat, and across India, Garba is celebrated for nine days during the festival of Navaratri.

**NEXT IAS GS FOUNDATION CLASS REFERENCE**

**Class Notes\_Weekly Current Affairs**



41. Consider the following statements:

**Statement-I:**

There is instability and worsening security situation in the Sahel region.

**Statement-II:**

There have been military takeovers/coups d'etat in several countries of the Sahel region in the recent past.

Which one of the following is correct in respect of the above statements?

- (a) Both Statement-I and Statement-II are correct and Statement-II explains Statement-I
- (b) Both Statement-I and Statement-II are correct, but Statement-II does not explain Statement-I
- (c) Statement-I is correct, but Statement-II is incorrect
- (d) Statement-I is incorrect, but Statement-II is correct

**Ans. (a)**

**Exp.** The Sahel is a semi-arid region in Africa that stretches from the Atlantic Ocean to the Red Sea, just south of the Sahara Desert. It is a transitional zone between the desert and the savanna and is characterized by its hot, dry climate, sparse vegetation, and nomadic pastoralist populations.

**Statement I is correct:** The Sahel region has been experiencing significant instability and a worsening security situation due to various factors, including political instability, extremist groups, poverty, and climate change.

**Statement II is correct:** There have been multiple military takeovers and coups in the Sahel region in recent years (e.g., Mali, Burkina Faso). These coups contribute directly to the political instability and insecurity in the region, thus explaining Statement I.

42. Consider the following statements:

**Statement-I:**

India does not import apples from the United States of America.

**Statement-II:**

In India, the law prohibits the import of Genetically Modified food without the approval of the competent authority.

Which one of the following is correct in respect of the above statements?

- (a) Both Statement-I and Statement-II are correct and Statement-II explains Statement-I
- (b) Both Statement-I and Statement-II are correct, but Statement-II does not explain Statement-I
- (c) Statement-I is correct, but Statement-II is incorrect
- (d) Statement-I is incorrect, but Statement-II is correct

**Ans. (d)**

**Exp. Statement 1 is not correct:** In entire 2022-23 (September-August), India had imported 50,000 boxes of apple from the US whereas prior to the additional duty levied, the annual import by India was about 5 million boxes.

**Statement 2 is correct:** India has specific regulations regarding the import of genetically modified (GM) food. As of March 1, 2021, the Food Safety and Standards Authority of India (FSSAI) requires a "non-GM origin and GM-free certificate" issued by the competent national authority of the exporting country for certain food products. This regulation applies to 24 listed food items imported into India

43. With reference to the Speaker of the Lok Sabha, consider the following statements:

While any resolution for the removal of the Speaker of the Lok Sabha is under consideration

- 1. He/She shall not preside
- 2. He/She shall not have the right to speak
- 3. He/She shall not be entitled to vote on the resolution in the first instance.

Which of the statements given above is/are correct

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

**Ans. (a)**

**Exp. Theme:** Parliament.

**Statement 1 is correct :** As per Article 96 of Constitution of India, The Speaker or the Deputy Speaker not to preside while a resolution for his removal from office is under consideration

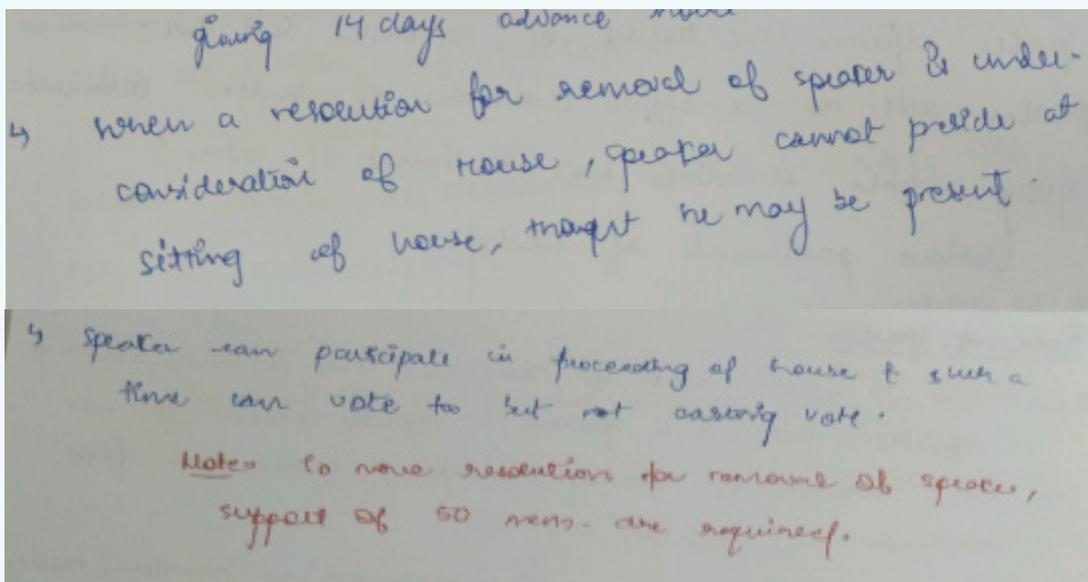
(1) At any sitting of the House of the People, while any resolution for the removal of the Speaker from his office is under consideration, the Speaker, or while any resolution for the removal of the Deputy Speaker from his office is under consideration, the Deputy Speaker, shall not, though he is present, preside, and the provisions of clause

(2) of article 95 shall apply in relation to every such sitting as they apply in relation to a sitting from which the Speaker, or, as the case may be, the Deputy Speaker, is absent.

**Statement 2 is incorrect:** The Speaker shall have the right to speak in and otherwise to take part in the proceedings of, the House of the People while any resolution for his removal from office is under consideration in the House and shall, notwithstanding anything in article 100, be entitled to vote only in the first instance (hence statement 3 is incorrect ) on such resolution or on any other matter during such proceedings but not in the case of an equality of votes.

**NEXT IAS GS FOUNDATION CLASS REFERENCE**

**Class Notes\_Polity**



44. With reference to the Indian Parliament, consider the following statements:
1. A bill pending in the Lok Sabha lapses on its dissolution
  2. A bill passed by the Lok Sabha and pending in the Rajya Sabha lapses on the dissolution of the Lok Sabha.
  3. A bill in regard to which the President of India notified his/her intention to summon the Houses to a joint sitting lapses on the dissolution of the Lok Sabha.

Which of the statements given above is/are correct?

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

**Ans. (b)**

**Exp. Theme :** Parliament When the Lok Sabha is dissolved, the position w.r.t. lapsing of bills is as follows:

- a. a bill pending in LS, whether originating in LS or transmitted to it by RS, lapses (. statement 1 is correct.)
- b. a bill passed by LS, but pending in RS lapses. (Statement 2 is Correct.)
- c. a bill not passed by the two houses die to disagreement and if the President has notified the holding of joint sitting before the dissolution of LS, does not lapse. (Statement 3 is incorrect).
- d. a bill pending in RS, but not passes by LS, does not lapse
- e. a bill passed by both houses, but pending assent of President, does not lapse
- f. a bill passed by both houses, but returned by President for reconsideration of houses, does not lapse

45. With reference to the Parliament of India, consider the following statements:
1. Prorogation of a House by the President of India does not require the advice of the Council of Ministers.
  2. Prorogation of a House is generally done after the House is adjourned sine die but there is no bar to the President of India prorogating the House which is in session.
  3. Dissolution of the Lok Sabha is done by the President of India who, save in exceptional circumstances, does so on the advice of the Council of Ministers

Which of the statements given above is/are correct?

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

**Ans. (c)**

**Exp. Theme:** Parliament.

**Statement 1 is incorrect :** The President acts on the advice of the Council of Ministers in most matters, including prorogation of a House. Therefore, prorogation does require the advice of the Council of Ministers.

**Statement 2 is correct :** Prorogation typically occurs after the House has been adjourned sine die( means without setting a date for resumption.) However, the President does have the power to prorogue a House even if it is in session, although this is less common.

**Statement 3 is correct :** Dissolution of the Lok Sabha is an action taken by the President based on the advice of the Council of Ministers. There are exceptional circumstances, such as a vote of no confidence, where the President might act independently, but these are rare.

**46.** Consider the following statements:

**Statement-I:**

The European Parliament approved The Net-Zero Industry Act recently.

**Statement-II:**

The European Union intends to achieve carbon neutrality by 2040 and therefore aims to develop all of its own clean technology by that time.

Which one of the following is correct in respect of the above statements?

- (a) Both Statement-I and Statement-II are correct and Statement-I Statement-II explains
- (b) Both Statement-I and Statement-II are correct, but Statement-II does not explain Statement-I
- (c) Statement-I is correct, but Statement-II is incorrect
- (d) Statement-I is incorrect, but Statement-II is correct

**Ans. (c)**

**Exp. Statement I is correct:** The European Parliament did approve the Net-Zero Industry Act recently. This act aims to accelerate the production of clean technologies within the EU.

**Statement II is incorrect:** The EU's target for carbon neutrality is 2050, not 2040. While the Net-Zero Industry Act is a step towards achieving this goal, the EU does not aim to develop all of its clean technology by that time. International collaboration and technology transfer will still play a role."

**47.** Consider the following statements:

**Statement-I:**

Recently, Venezuela has achieved a rapid recovery from its economic crisis and succeeded in preventing its people from fleeing/emigrating to other countries.

**Statement-II:**

Venezuela has the world's largest oil reserves

Which one of the following is correct in respect of the above statements?

- (a) Both Statement-I and Statement-II are correct and Statement-II explains Statement-I
- (b) Both Statement-I and Statement-II are correct, but Statement-II does not explain Statement-I
- (c) Statement-I is correct, but Statement-II is incorrect
- (d) Statement-I is incorrect, but Statement-II is correct

**Ans. (d)**

**Exp. Statement I is not correct:** Venezuela has not recently achieved a rapid recovery from its economic crisis. The country has been facing a severe economic and humanitarian crisis for years, leading to widespread poverty,

hyperinflation, and shortages of basic goods. This crisis has caused millions of Venezuelans to flee the country as refugees and migrants.

**Statement II is correct:** Venezuela does have the world's largest proven oil reserves. However, despite this vast resource, the country's oil industry has been mismanaged and has suffered from underinvestment, leading to a decline in production and a significant decrease in revenue. This decline in oil production has contributed to the economic crisis in Venezuela.

48. With reference to the Digital India Land Records Modernisation Programme, consider the following statements:
1. To implement the scheme, the Central Government provides 100% funding.
  2. Under the Scheme, Cadastral Maps are digitised.
  3. An initiative has been undertaken to transliterate the Records of Rights from local language to any of the languages recognized by the Constitution of India. Which of the statements given above are correct?
- (a) 1 and 2 only  
(b) 2 and 3 only  
(c) 1 and 3 only  
(d) 1, 2 and 3

**Ans. (d)**

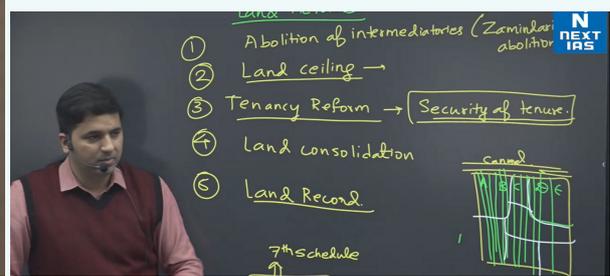
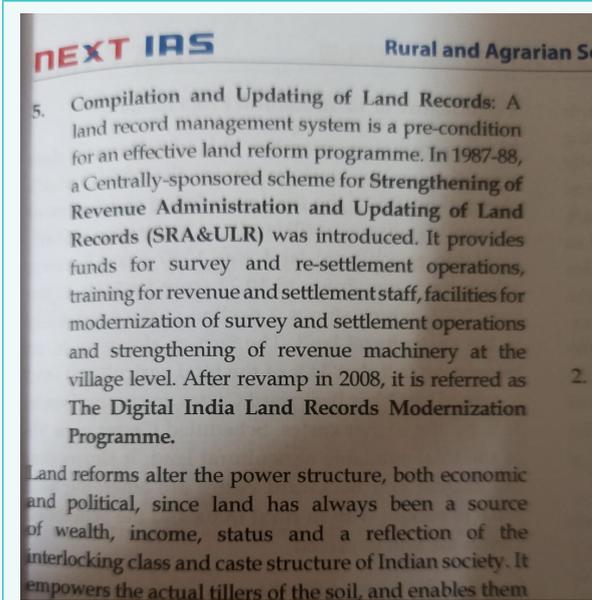
**Exp. All the statements are correct:** Digital India Land Records Modernization Programme (erstwhile National Land Record Modernization Programme-) was revamped and converted as a Central Sector Scheme with effect from 1st April, 2016 with 100% funding by the Centre.

Cadastral Maps digitized is more than 68% in 28 States/ UTs (2,52,51,446 maps out of total 3,69,86,358 maps)

Currently, the Records of Rights in States and Union Territories are maintained in local languages. The linguistic barriers pose serious challenges for access of information and usage in understandable form. In order to address the problem of linguistic barriers in land governance, the Government with the technical support of Centre for Development of Advanced Computing (C-DAC) Pune, has undertaken an initiative to transliterate the Records of Rights available in local language to any of the 22 Schedule VIII languages of the Constitution. Pilot test is underway in 8 States - Bihar, Maharashtra, Gujarat, Puducherry, Uttar Pradesh, Tamil Nadu, Tripura and UT of Jammu & Kashmir.

**NEXT IAS GS FOUNDATION CLASS REFERENCE**

**Class Notes\_Indian Society**



49. With reference to the 'Pradhan Mantri Surakshit Matritva Abhiyan', consider the following statements
1. This scheme guarantees a minimum package of antenatal care services to women in their second and third trimesters of pregnancy and six months post-delivery health care service in any government health facility
  2. Under this scheme, private sector health care providers of certain specialities can volunteer to provide services at nearby government health facilities.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

**Ans. (b)**

**Exp. Statement 1 is not correct :** PMSMA guarantees a minimum package of antenatal care services to women in their 2nd / 3rd trimesters of pregnancy at designated government health facilities. Under SUMAN Yojana or Surakshit Matritva Aashwasan Yojana , pregnant women, sick newborns, and mothers receive zero expense access up to six months after delivery

**Statement 2 is correct:** OBGY specialists/ Radiologist/physicians from private sector would be encouraged to provide voluntary services at public health facilities where government sector practitioners are not available or inadequate.

**NEXT IAS GS FOUNDATION CLASS REFERENCE**

**Class Notes\_Indian Society**

50. With reference to the Pradhan Mantri Shram Yogi Maan-dhan (PM-SYM) Yojana, consider the following statements:
1. The entry age group for enrolment in the scheme is 21 to 40 years.
  2. Age specific contribution shall be made by the beneficiary.
  3. Each subscriber under the scheme shall receive a minimum pension of 3,000 per month after attaining the age of 60 years.
  4. Family pension is applicable to the spouse and unmarried daughters.

Which of the statements given above is/are correct?

- (a) 1, 3 and 4
- (b) 2 and 3 only
- (c) 2 only
- (d) 1, 2 and 4

Ans. (b)

**Exp. Statement 1 is not correct :** Pradhan Mantri Shram Yogi Maan-dhan (PM-SYM) is a voluntary and contributory Pension Scheme for Unorganized Workers for entry age of 18 to 40 years with monthly income of Rs. 15000 or less.

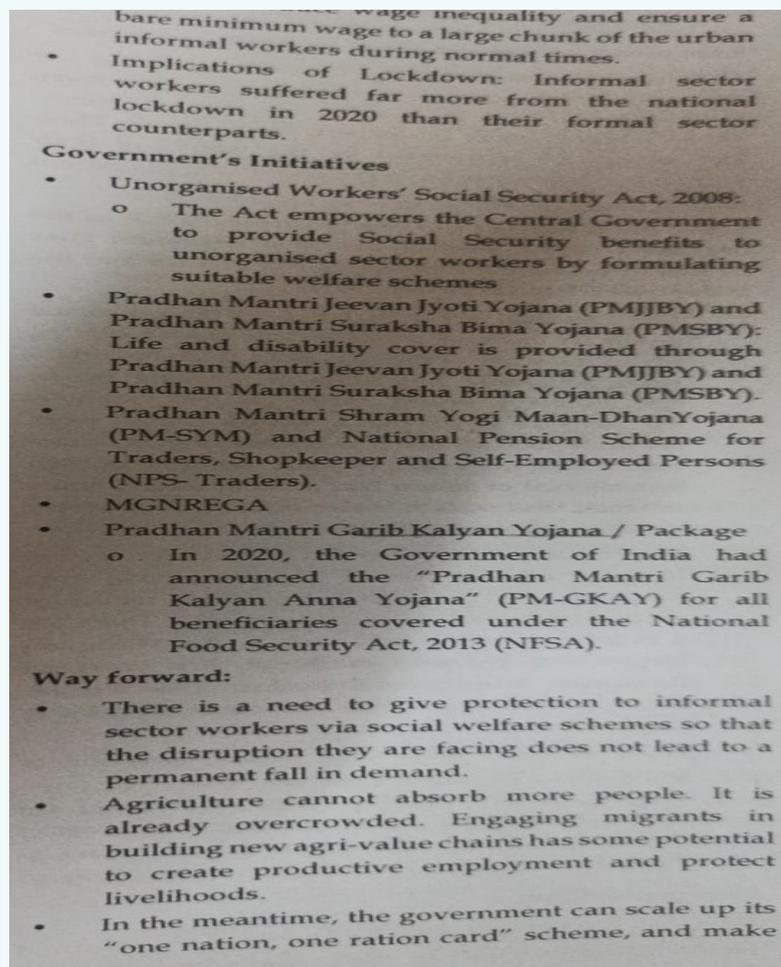
**Statement 2 is correct:** The subscriber's contributions to PM-SYM shall be made through 'auto-debit' facility from his/ her savings bank account/ Jan- Dhan account. The subscriber is required to contribute the prescribed contribution amount from the age of joining PM-SYM till the age of 60 years.

**Statement 3 is correct :** The benefit of Pradhan Mantri Shram Yogi Maan-Dhan yojana is only after attaining the age of 60 years in the form of monthly pension of Rs. 3000/-. As such no registered worker under this scheme has attained the age of 60 years.

**Statement 4 is not correct :** It is a voluntary and contributory pension scheme under which the beneficiary would receive a minimum assured pension of Rs 3000/- per month after attaining the age of 60 years and if the beneficiary dies, the spouse of the beneficiary shall be entitled to receive 50% of the pension as family pension. Family pension is applicable only to spouse.

**NEXT IAS GS FOUNDATION CLASS REFERENCE**

**Class Notes\_Indian Society**



51. Consider the following statements:

**Statement-I:**

The atmosphere is heated more by incoming solar radiation than by terrestrial radiation.

**Statement-II:**

Carbon dioxide and other greenhouse gases in the atmosphere are good absorbers of long wave radiation.

Which one of the following is correct in respect of the above statements?

- (a) Both Statement-I and Statement-II are correct and Statement-II explains Statement-I
- (b) Both Statement-I and Statement-II are correct. but Statement-II does not explain Statement-I
- (c) Statement-I is correct, but Statement-II is incorrect
- (d) Statement-I is incorrect, but Statement-II is correct

**Ans. (d)**

**Exp. Statement 1 is not correct :**

The earth's surface receives most of its energy in short wavelengths. The atmosphere is largely transparent to short wave solar radiation

The incoming solar radiation passes through the atmosphere before striking the earth's surface, which heats the earth's surface.

The earth after being heated by insolation transmits the heat to the atmospheric layers near to the earth in long wave form. Within the troposphere water vapour, ozone and other gases absorb much of the long wave radiations

Thus, atmosphere is heated more by the terrestrial radiation than by the solar radiations. Hence Statement 1 is not correct.

**Statement 2 is correct :**

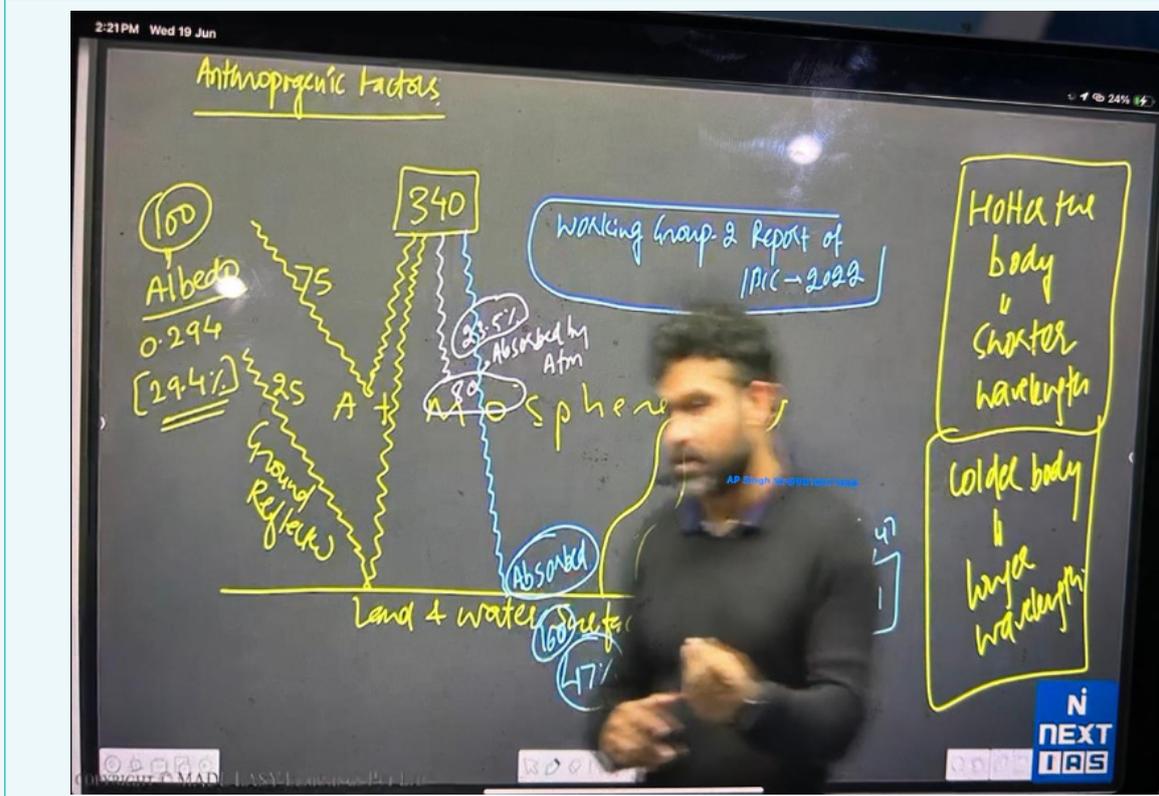
Greenhouse gases in the atmosphere (such as water vapor and carbon dioxide) absorb most of the Earth's emitted longwave infrared radiation, which heats the lower atmosphere.

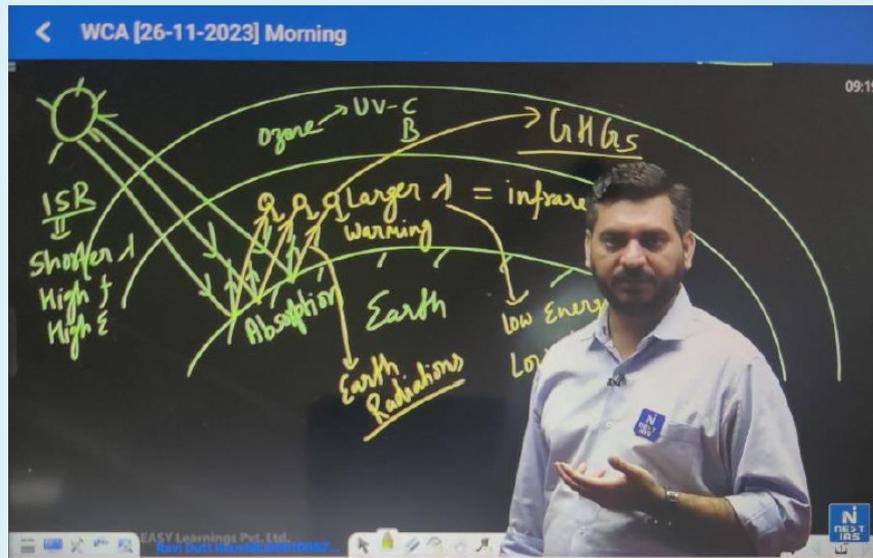
Increasing concentrations of greenhouse gases such as carbon dioxide and methane increase the temperature of the lower atmosphere by restricting the outward passage of emitted radiation, resulting in "global warming," or, more broadly, global climate change.

**Statement 1 is not correct and statement 2 is correct, hence Option D is the correct answer.**

**NEXT IAS GS FOUNDATION CLASS REFERENCE**

**Class Notes\_ Environment, Geography and Weekly Current Affairs**





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① Troposphere - It is lower most layer of atmosphere which extends upto the height of around 8 Km's near poles and 18 Km's around equator.

- ↳ Tropopause - different height season.
- ↳ Variation in magnitude of gravity (higher gravity near the poles)

Thickness & Temperature of Ground

- ↳ More than 99% of atmospheric water vapour and more than 75% of atmospheric gases are present in Troposphere.

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- ↳ Troposphere is heated by the long wave terrestrial radiation that's why in troposphere normally temperature decreases with height at the rate of  $6.5^{\circ}\text{C}$  per Km (Normal lapse rate)

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Lapse rate & amount of sunlight.

The lapse rate is higher in summer season and lower in winter season. Due to high lapse rate in troposphere thermal convection currents are created. Thermal convection in atmosphere facilitates formation of cloud and rainfall.

During winter season, in middle and high latitude areas grounds get very cold due to low insulation. In this condition the air in contact with ground gets colder than over lying air. This condition is called as negative lapse rate.

52. Consider the following statements:

**Statement-I:**

Thickness of the troposphere at the equator is much greater as compared to poles.

**Statement-II:**

At the equator, heat is transported to great heights by strong convectional currents.

Which one of the following is correct in respect of the above statements?

- (a) Both Statement-I and Statement-II are correct and Statement-I Statement-II explains
- (b) Both Statement-I and Statement-II are correct, but Statement-II does not explain Statement-I
- (c) Statement-I is correct, but Statement-II is incorrect
- (d) Statement-I is incorrect, but Statement-II is correct

**Ans. (a)**

**Exp. Statement 1 is correct :**

The troposphere is the lowermost layer of the atmosphere. Its average height is 13 km and extends roughly to a height of 8 km near the poles and about 18 km at the equator.

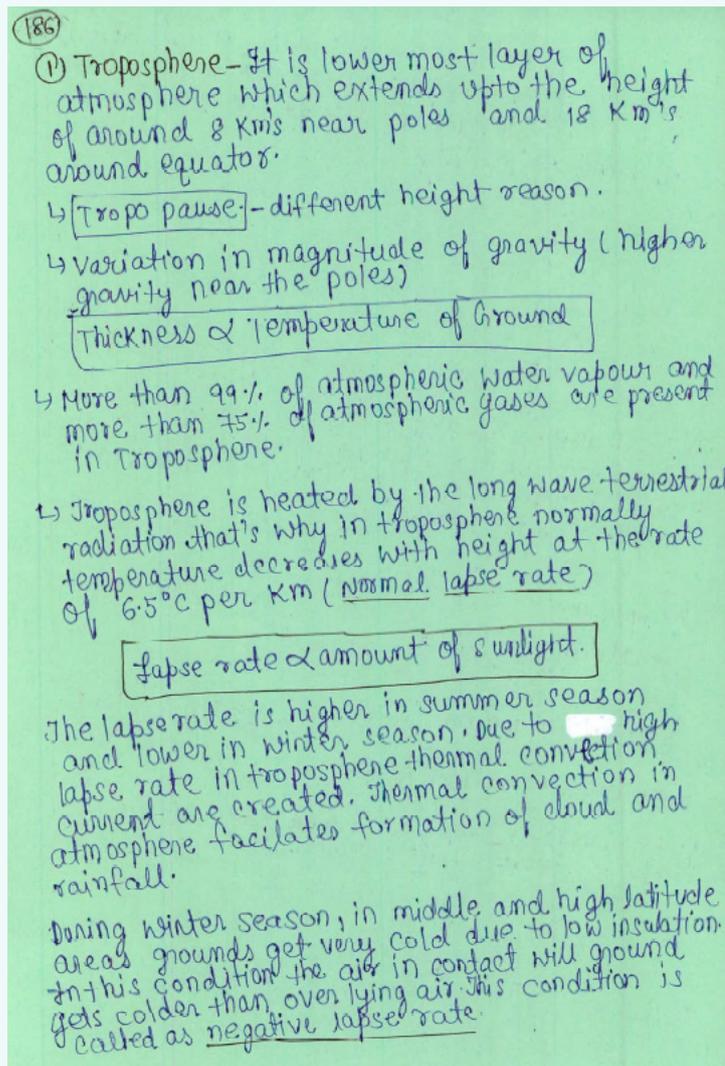
**Statement 2 is correct**

Due to the intense heating at the equator, strong convection currents are generated, which transport air to greater heights and increase the height of the troposphere.

**Both Statement I and II are correct, and Statement II explains Statement I.**

**NEXT IAS GS FOUNDATION CLASS REFERENCE**

**Class Notes\_Geography**



53. Consider the following
1. Pyroclastic debris
  2. Ash and dust
  3. Nitrogen compounds
  4. Sulphur compounds

How many of the above are products of volcanic eruptions?

- (a) Only one
- (b) Only two
- (c) Only three
- (d) All four

**Ans. (d)**

**Exp. All are correct:** In addition to lava, other materials expelled during a volcanic eruption include pyroclastic debris, volcanic bombs, ash, dust, and gases such as nitrogen compounds, sulfur compounds, and trace amounts of chlorine, hydrogen, and argon. Hence correct answer is option (d).

**NEXT IAS GS FOUNDATION CLASS REFERENCE****Class Notes\_Geography**

- This envelope was blown away by solar (184) winds.
- ② **Volcanic Phase** - In the beginning earth was extremely hot and molten body. In course of time it lost some heat through radiation and volcanic eruption. Gases like  $SO_2$ ,  $H_2S$ ,  $H_2O$ ,  $NO_x$ ,  $CO_2$  etc were out due to volcanic eruption and created a new atmosphere. Anaerobic atmosphere due to absence of molecular  $O_2$ .
- ③ **Organic Phase** - This phase started with evolution of Cyanobacteria (Blue green Algae) Blue green Algae and other green plants converted a portion of carbon dioxide into  $O_2$  by photosynthesis.

54. Which of the following is/are correct inference/inferences from isothermal maps in the month of January?
1. The isotherms deviate to the north over the ocean and to the south over the continent.
  2. The presence of cold ocean currents, Gulf Stream and North Atlantic Drift make the North Atlantic Ocean colder and the isotherms bend towards the north.

Select the answer using the code given below:

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

**Ans. (a)**

**Exp. Statement 1 is correct:**

In general the effect of the latitude on temperature is well pronounced on the map, as the isotherms are generally parallel to the latitude. The deviation from this general trend is more pronounced in January than in July, especially in the northern hemisphere.

In the northern hemisphere the land surface area is much larger than in the southern hemisphere. Hence, the effects of land mass and the ocean currents are well pronounced. In January the isotherms deviate to the north over the ocean and to the south over the continent.

**Statement 2 is not correct:**

It can be seen in the North Atlantic Ocean. The presence of warm ocean currents, Gulf Stream and North Atlantic drift, make the Northern Atlantic Ocean warmer and the isotherms bend towards the north. Over the land the temperature decreases sharply and the isotherms bend towards south in Europe

**NEXT IAS GS FOUNDATION CLASS REFERENCE**

**Class Notes\_Geography**

**HORIZONTAL DISTRIBUTION OF TEMPERATURE**

↳ Horizontal distribution of temperature is expressed on the map through isotherms. Isotherms are imaginary lines for connecting the places recording same temperature at mean sea level. Isotherms are drawn to show the seasonal variation in distribution of temperature on earth's surface

• ↳ If isotherms encounter colder place it will bend towards equator, a warmer place it will bend towards poles. (199)

• ↳ On the basis of horizontal distribution of temperature 3 temperature zones can be identified in each hemisphere.

**55.** Which of the following countries are well known as the two largest cocoa producers in the world?

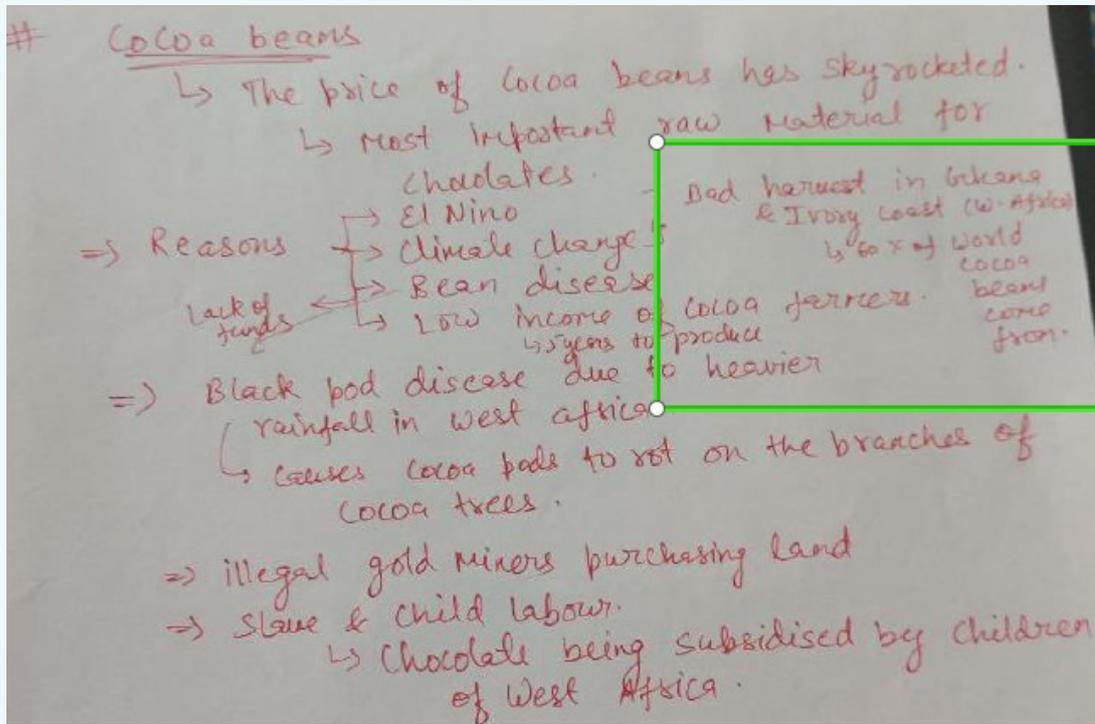
- (a) Algeria and Morocco
- (b) Botswana and Namibia
- (c) Cote d' Ivoire Coast and Ghana
- (d) Madagascar and Mozambique

**Ans. (c)**

**Exp.** Côte d'Ivoire is the leading producer, accounting for one-third of the world's cocoa production. Ghana is the second largest cocoa producer, following Côte d'Ivoire.

**NEXT IAS GS FOUNDATION CLASS REFERENCE**

**Class Notes\_ Weekly Current Affairs**



56. With reference to the Himalayan rivers joining the Ganga downstream of Prayagraj from West to East, which one of the following sequences is correct?
- (a) Ghaghara – Gomati – Gandak – Kosi
  - (b) Gomati – Ghaghara – Gandak – Kosi
  - (c) Ghaghara – Gomati – Kosi – Gandak
  - (d) Gomati – Ghaghara – Kosi – Gandak

**Ans. (b)**

**Exp.** The correct sequence is - Gomati, Ghaghara, Gandak and Kosi



57. Consider the following statements:

**Statement-I:**

Rainfall is one of the reasons for weathering of rocks.

**Statement-II:**

Rain water contains carbon dioxide in solution.

**Statement-III:**

Rain water contains atmospheric oxygen.

Which one of the following is correct in respect of the above statements?

- (a) Both Statement-II and Statement-III are correct and both of them explain Statement-I
- (b) Both Statement-II and Statement-III are correct, but only one of them explains Statement-I
- (c) Only one of the Statements II and III is correct and that explains Statement-I
- (d) Neither Statement-II nor Statement-III is correct

**Ans. (a)**

**Exp.** Rainwater contributes to the weathering process because it contains both oxygen and carbon dioxide, which are crucial for chemical reactions that break down rocks and minerals.

As rainwater falls through the atmosphere, it absorbs carbon dioxide (CO<sub>2</sub>), forming carbonic acid (H<sub>2</sub>CO<sub>3</sub>) when it combines with water (H<sub>2</sub>O).

This weak acid is effective in chemically weathering certain types of rocks, particularly those containing calcium carbonate (like limestone).

Calcium carbonate dissolves in the acidic water, forming calcium bicarbonate, which is soluble and can be washed away, leading to the gradual breakdown of the rock.

Rainwater also contains dissolved oxygen (O<sub>2</sub>), which is essential for oxidation reactions. These reactions are particularly significant for weathering rocks that contain iron. When iron-bearing minerals are exposed to oxygen and water, they undergo oxidation to form iron oxides, commonly known as rust. This reaction forms iron hydroxide, which further breaks down into iron oxide, weakening the rock structure and contributing to its disintegration..

58. Consider the following countries:

- 1. Finland
- 2. Germany
- 3. Norway
- 4. Russia

How many of the above countries have a border with the North Sea?

- (a) Only one
- (b) Only two
- (c) Only three
- (d) All four

**Ans. (b)**

**Exp.**

North Sea, shallow, northeastern arm of the Atlantic Ocean, located between the British Isles and the mainland of northwestern Europe.

The sea is bordered by the island of Great Britain to the southwest and west, the Orkney and Shetland islands to the northwest, Norway to the northeast, Denmark to the east, Germany and the Netherlands to the southeast, and Belgium and France to the south.

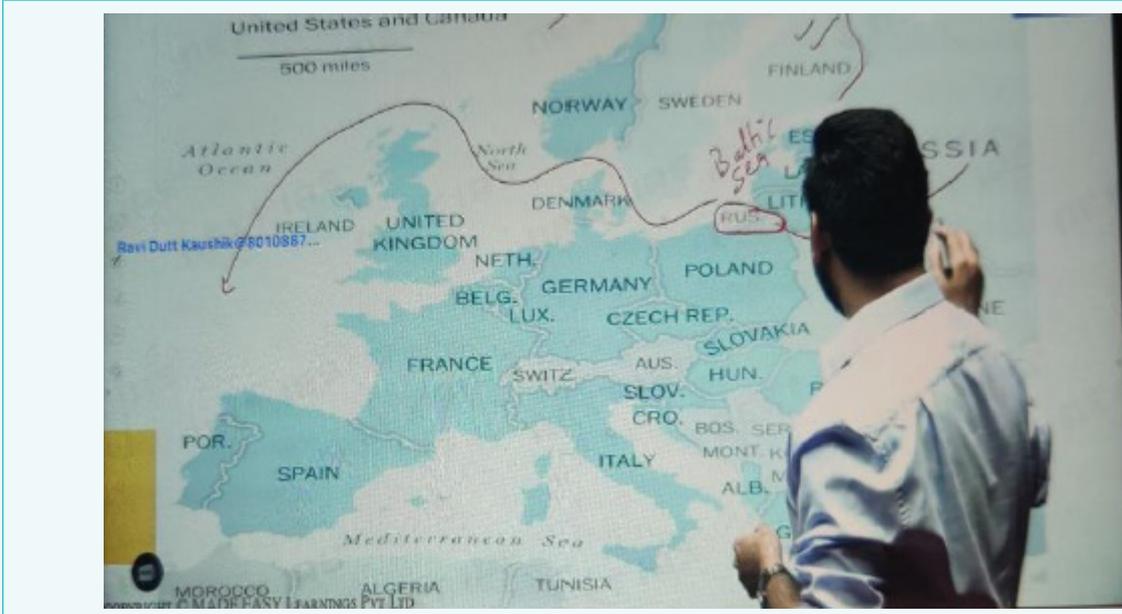
It is connected to the Atlantic by the Strait of Dover and the English Channel and opens directly onto the ocean between the Orkney and Shetland islands and between the Shetland Islands and Norway.

Finland and Russia do not share their border with the North Sea.



**NEXT IAS GS FOUNDATION CLASS REFERENCE**

**Class Notes\_ Weekly Current Affairs**



59. Consider the following information:

	Waterfall	Region	River
1.	Dhuandhar	Malwa	Narmada
2.	Hundru	Chota Nagpur	Subarnarekha
3.	Gersoppa	Western Ghats	Netravati

In how many of the above rows is the given information correctly matched?

- (a) Only one
- (b) Only two
- (c) Only three
- (d) All four

**Ans. (a)**

**Exp. Statement 1 is not correct:**

Dhuandhar Falls is situated in Jabalpur. It is an important place of tourism in the whole of Madhya Pradesh. The shade of this fall falling from a height of 10 metres is unique. It originates from Narmada river. It does not fall in Malwa region.

**Statement 2 is correct :**

The Hundru Falls of Ranchi (eastern side of Chota Nagpur Plateau) is created on the course of the Subarnarekha River, where it falls from a height of 320 feet creating the highest waterfalls of Jharkhand.

**Statement 3 is not correct :**

Jog Falls or Gersoppa Falls is created by the Sharavathi River falling from a height of 253 m, making it the second-highest plunge waterfall in India.

It is located near Sagara, Shimoga District of Karnataka state, and lies in Western Ghats (Malenadu)

**60.** Consider the following information:

	Region	Name of the mountain range	Type of mountain
1.	Central	Vosges	Fold mountain
2.	Europe	Alps	Block mountain
3.	North America	Appalachians	Fold mountain
4.	South America	Andes	Fold mountain

In how many of the above rows is the given information correctly matched?

- (a) Only one
- (b) Only two
- (c) Only three
- (d) All four

**Ans. (b)**

**Exp. Statement 1 is not correct :**

Vosges, a type of Block mountain, massif extending west of the Rhine River Valley in eastern France, not in Central Asia.

**Statement 2 is not correct :**

Alps are fold mountains, a small segment of a discontinuous mountain chain that stretches from the Atlas Mountains of North Africa across southern Europe and Asia to beyond the Himalayas.

**Statement 3 is correct :**

Appalachian Mountains, classified as fold mountains, great highland system of North America, the eastern counterpart of the Rocky Mountains.

**Statement 4 is correct :**

The Andes are the world's longest mountain chain. They stretch along the west coast of South America.

Here, the Nazca plate is moving down below the South American plate. The Andes are mostly being folded up from the rocks of the South American plate. Hence are fold mountains.

**61.** The organisms "Cicada, Frog hopper and Pond skater" are:

- (a) Birds
- (b) Fish
- (c) Insects
- (d) Reptiles

**Ans. (c)**

**Exp.** Cicada, Froghopper and Pond skater all are insects.

Cicada, (family Cicadidae), family of more than 3,000 species of sound-producing insects. Cicadas are found in tropical and temperate areas worldwide and occur in deserts, grasslands, and forests.



Froghopper, (family Cercopidae), any of numerous species of small (less than 1.5 cm [0.6 inch] long) hopping insects (order Homoptera), worldwide in distribution, that produce a frothy substance known as spittle.

Common pond skaters (family Gerridae) are predatory insects which use water repellent hairs on their feet to 'skate' across water surfaces to catch their prey. Sensitive hairs on their body and legs detect the vibrations caused by the movements of other small insects upon the water surface.

**62.** Consider the following statements:

**Statement-I:**

Many chewing gums found in the market are considered a source of environmental pollution.

**Statement-II:**

Many chewing gums contain plastic as gum base.

Which one of the following is correct in respect of the above statements?

- (a) Both Statement-I and Statement-II are correct and Statement-II explains Statement-I
- (b) Both Statement-I and Statement-II are correct, but Statement-II does not explain Statement-I
- (c) Statement-I is correct, but Statement-II is incorrect
- (d) Statement-I is incorrect, but Statement-II is correct

**Ans. (a)**

**Exp. Statement 1 is correct :**

Chewing gum doesn't biodegrade; it can take up to 25 years to decompose naturally, causing long-lasting environmental harm. Beyond its environmental footprint, non-sustainable gum affects aquatic ecosystems too. Discarded gum often ends up in water bodies, where its chemicals can harm marine life and disrupt delicate ecosystems.

**Statement 2 is correct:**

Chewing gum contains plastic. The ingredient known as "gum base" in the list of ingredients in chewing gum is largely made of polyvinyl acetate, which is not bio-degradable and remains in environment for a very long time.

Hence, both statement 2 and statement 1 are correct and statement 2 explains statement 1

**63.** Consider the following pair:

	Country	Animal found in its natural habitat
1.	Brazil	Indri
2.	Indonesia	Elk
3.	Madagascar	Bonobo

How many of the pairs given above are correctly matched?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

**Ans. (d)**

**Exp. Statement 1 not correct:**

Indri indri is considered to be the largest of the surviving lemur species. It is slender, long-limbed primate found in the forests of Madagascar. The indri is an endangered species found only in remote parts of northeastern Madagascar

**Statement 2 is not correct:**

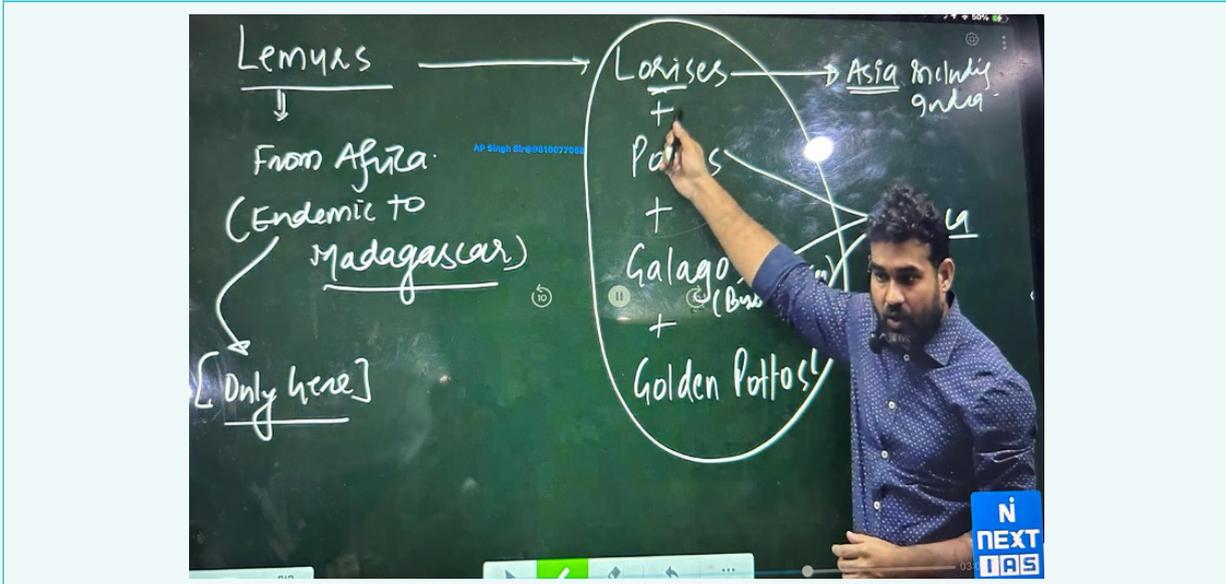
Elk, (*Cervus elaphus canadensis*), the largest and most advanced subspecies of red deer (*Cervus elaphus*), found in North America and in high mountains of Central Asia. It is a member of the deer family, Cervidae (order Artiodactyla).

**Statement 3 is not correct:**

Bonobo, (*Pan paniscus*), ape that was regarded as a subspecies of the chimpanzee (*Pan troglodytes*) until 1933, when it was first classified separately. The bonobo is found only in lowland rainforests along the south bank of the Congo River in the Democratic Republic of the Congo.

**NEXT IAS GS FOUNDATION CLASS REFERENCE**

**Class Notes\_Environment**



64. Consider the following statements regarding World Toilet Organization:
1. It is one of the agencies of the United Nations.
  2. World Toilet Summit, World Toilet Day and World Toilet College are the initiatives of this organization, to inspire action to tackle the global sanitation crisis.
  3. The main focus of its function is to grant funds to the least developed countries and developing countries to achieve the end of open defecation.

Which of the statements given above is/are correct?

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

**Ans. (a)**

**Exp. Statement 1 is not correct**

World Toilet Organisation was founded on 19 November 2001. It is a global non-profit organisation committed towards improving toilet and sanitation conditions worldwide.

Although, World Toilet Organization was granted consultative status with the United Nations Economic and Social Council in 2013, but it is not a agency of UN.

**Statement 2 is correct**

Initiatives of WTO includes -

1. World Toilet Summit
2. World Toilet Day
3. World Toilet College

World Toilet Summit has been the primary toilet-based and sanitation-driven conference in the world, It encourages delegates to share knowledge, best practices in the Water, Sanitation and Hygiene (WASH) sector and form potential partnerships across each summit every year.

World Toilet Day, celebrated on 19 November every year, is about inspiring action to tackle the global sanitation crisis and reach the 3.5 billion people still living without safely managed sanitation.

Established by the World Toilet Organization in 2001, World Toilet Day was made an official United Nations Observance in 2013.

Every year, UN-Water — the UN's coordination mechanism on water and sanitation — sets the theme for World Toilet Day. In 2023, the focus is on Accelerating Change.

World Toilet College was launched in 2016 in Rishikesh in partnership with local partners Global Interfaith Wash Alliance (GIWA) and support of Reckitt Benckiser, one of the largest FMCG companies.

**Statement 3 is not correct -**

World Toilet Organization is a global non-profit committed to improving toilet and sanitation conditions worldwide. It focusses on empowering individuals through education, training and building local marketplace opportunities to advocate for clean and safe sanitation facilities in their communities.

**65.** Consider the following statements:

1. Lions do not have a particular breeding season.
2. Unlike most other big cats, cheetahs do not roar.
3. Unlike male lions, male leopards do not proclaim their territory by scent marking.

Which of the statements given above are correct?

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

**Ans. (a)**

**Exp. Statement 1 is correct :**

Lions have no particular breeding season. they breed throughout the year. Females are receptive to mating for three or four days within a widely variable reproductive cycle throughout the year every 16 days, remaining in estrus for four to eight days.

**Statement 2 is correct :**

Cheetahs belong to the “purring cats” subfamily and as such do not roar.

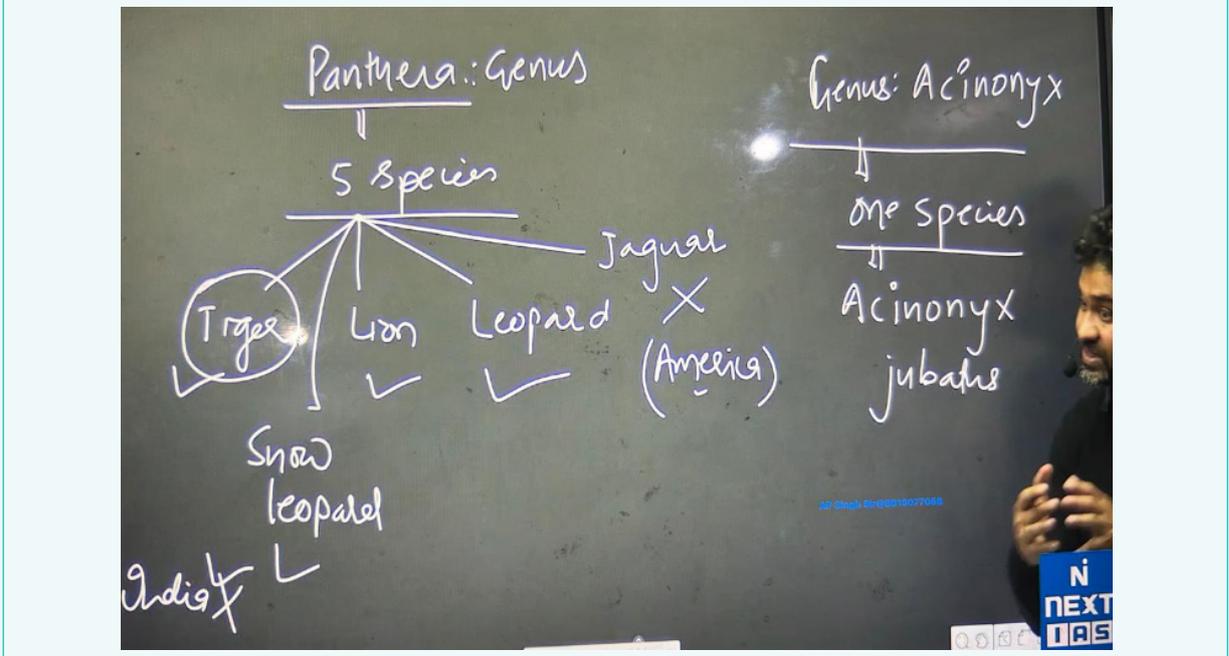
**Statement 3 is not correct :**

These elusive cats have excellent senses, and this is evident when it comes to the different methods used in demarcating the boundaries of their territories. Both sexes use urine to mark their territories, and often after urinating a male will then scrape the ground to transfer the scent of his urine onto his feet to be carried during territorial

boundary patrols. Leopards are also often seen rubbing their faces and necks on vegetation as they are walking along their territory. By doing this, the Leopard is transferring secretions from a cheek gland, which then carries olfactory messages to other Leopards.

**NEXT IAS GS FOUNDATION CLASS REFERENCE**

**Class Notes\_Environment**



66. Which one of the following is the correct description of “100 Million Farmers”?
- (a) It is a platform for accelerating the transition towards food and water systems that are net-zero (carbon), nature-positive and that aims to increase farmer resilience.
  - (b) It is an international alliance and a network of individuals and farming organisations interested in supporting and strengthening the development of the organic animal husbandry.
  - (c) It is a digital platform fully integrated with service providers and built on blockchain that lets buyers, sellers and third parties trade fertilizers quickly and securely.
  - (d) It is a platform with the mission of encouraging the farmers to form Farmer Product Organisations or Agribusiness Consortia, thus facilitating the access to global open markets to sell their products.

**Ans. (a)**

**Exp.** 100 Million Farmers is an initiative of World Economic Forum

100 Million Farmers is a platform supporting private and public leaders to position food and farmers as central pillars on the global climate and nature agenda, and accelerate collective action to scale climate-and nature-friendly agricultural practices.

100 Million Farmers supports a global agenda for the adoption of regenerative agriculture and climate adaptation practices at the farm level, by focusing on bridging a finance gap and soil knowledge gap – key issue areas that retroactively feed each other and which mutually bolster access to finance and improved agricultural outcomes.

67. Consider the following:
1. Battery storage
  2. Biomass generators
  3. Fuel cells
  4. Rooftop solar photovoltaic units

How many of the above are considered “Distributed Energy Resources”?

- (a) Only one
- (b) Only two
- (c) Only three
- (d) All four

**Ans. (d)**

**Exp.** Distributed energy resources are small, modular, energy generation and storage technologies that provide electric capacity or energy where you need it.

**Option (d) is the correct answer:** Distributed Energy Resources include -

1. **Battery storage**
2. **Biomass generators, which are fuelled with waste gas or industrial and agricultural by-products.**
3. **Fuel cells.**
4. **Roof top solar photovoltaic units**
5. Wind generating units
6. Batteries in electric vehicles used to export power back to the grid
7. Combined heat and power units, or tri-generation units that also utilise waste heat to provide cooling
8. Open and closed cycle gas turbines
9. Reciprocating engines (diesel, oil)
10. Hydro and mini-hydro schemes

**68.** Which one of the following shows a unique relationship with an insect that has coevolved with it and that is the only insect that can pollinate this tree?

- (a) Fig
- (b) Mahua
- (c) Sandalwood
- (d) Silk cotton

**Ans. (a)**

**Exp. Option (a) is the correct answer:**

Fig trees have no visible flowers. A fig is actually the stem of an inflorescence, very enlarged and fleshy, that surrounds the tiny flowers inside. The crunchy little things that you notice when eating a fig are the seeds, each corresponding to one flower. Such a unique flower requires a unique pollinator. All fig trees are pollinated by very small wasps of the family Agaonidae. Each specie of fig requires the services of one species of wasps for example The strangler fig is pollinated by *Pegoscopus mexicanus* and the shortleaf fig by *Pegoscopus tonduzi*.

When the female flowers inside the immature fruit are ready for pollination the fig emits an enticing aroma that attracts only female wasps of the specific type for that tree. The wasp finds the fig by its scent and struggles to get inside through the small opening at the end of the fig. It is such a tight passage that the wasp usually loses its wings and pieces of antennae. It does not matter because it will never need them again. It runs around the interior of the fruit visiting many flowers, laying its eggs inside the future seeds that will nourish its progeny and also spreading the pollen collected from the previous fig where it was born. This pollen will allow all seeds to grow, not just the ones where it has deposited eggs. The ovary of some flowers is safely out of reach of the wasp, so it can't lay its eggs in them and those seeds can reach maturity. Having fulfilled her life's mission the female wasp dies inside the fig.

The eggs become grubs that grow inside the seeds. After completing their full development in a few weeks they emerge from inside the seeds. The males emerge first and start looking for females to mate with. They are smaller than the females and don't even have wings; they will never fly. After mating they, like their mother, die inside the fig that was their home all their lives. When the females emerge they are already fertilized and ready to find another fig in which to lay their eggs. At this point, the male flowers inside the fig are ripe and loaded with pollen. Before abandoning their home the females will remember to take a supply of such pollen to carry to the next fig.

This incredible partnership requires a very fine tuning and synchronicity on the part of the plant and of the pollinator. It is often mentioned as a fine example of coevolution.

69. Consider the following:

1. Butterflies
2. Fish
3. Frogs

How many of the above have poisonous species among them?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

**Ans. (c)**

**Exp.** Some species of Butterfly, frogs and fish are poisonous like

eg Monarch Butterfly, Poisonous Dart Frogs,

Puffer Fish

Hence, all three are correct.

70. Consider the following:

1. Cashew
2. Papaya
3. Red sanders

How many of the above trees are actually native to India?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

**Ans. (a)**

**Exp. Statement 1 is not correct:**

Cashew is native to South America -Northeast Brazil

**Statement 2 is not correct :**

Papaya originated from southern Mexico, Central America, and northern South America.

It is now cultivated in most tropical countries.

**Statement 3 is correct:**

Red sanders is native and endemic to Andhra Pradesh (India)

71. Consider the following airports:

1. Donyi Polo Airport
2. Kushinagar International Airport
3. Vijayawada International Airport

In the recent past, which of the above have been constructed as Greenfield projects?

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

**Ans. (a)**

**Exp. Option (a) is correct:**

A Greenfield Project is a type of project that involves creating something from scratch. It is a term used to describe a project that has no existing infrastructure, processes, or systems in place.

Government of India has formulated a Greenfield Airports Policy, 2008 which provides detailed guidelines, procedures and steps related to construction of Greenfield airports across the country, including in Bihar.

Under the GFA policy, Government of India has accorded 'In-Principle' approval for setting up of 21 Greenfield Airports namely, Mopa in Goa, Navi Mumbai, Shirdi and Sindhudurg in Maharashtra, Kalaburagi, Vijayapura, Hassan and Shivamogga in Karnataka, Dabra (Gwalior) in Madhya Pradesh, Kushinagar and Noida (Jewar) in Uttar Pradesh, Dholera and Hirasar in Gujarat, Karaikal in Puducherry, Dagadarthi, Bhogapuram and Orvakal (Kurnool) in Andhra Pradesh, Durgapur in West Bengal, Pakyong in Sikkim, Kannur in Kerala and Itanagar in Arunachal Pradesh across the country.

In a key step to boost connectivity in the Northeast, the Prime Minister inaugurated the first greenfield airport in Arunachal Pradesh - 'Donyi Polo Airport, Itanagar'.

**72.** With reference to "water vapour", which of the following statements is/are correct?

1. It is a gas, the amount of which decreases with altitude.
2. Its percentage is maximum at the poles.

Select the answer using the code given below:

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

**Ans. (a)**

**Exp. Statement 1 is correct:**

Water is present in the atmosphere in three forms namely – gaseous, liquid and solid. Gaseous form of water is referred to as Water Vapour. It is one of the most important Green House Gases of the atmosphere.

The amount of water vapour decreases rapidly with altitude, as with altitude the temperature drops and it results in condensation of water vapour.

**Statement 2 is not correct:**

Humidity refers to the presence of water vapor in the air. As temperature rises, more water evaporates and becomes water vapor, thereby increasing the humidity levels in the atmosphere. Because temperatures are generally higher at the equator compared to the poles, the percentage of water vapor in the atmosphere is higher near the equator and lower at the poles.

**NEXT IAS GS FOUNDATION CLASS REFERENCE**

**Class Notes\_Geography**

**WATER VAPOUR**

- ↳ Gaseous water in atmosphere is called as water vapour.
- ↳ Atmosphere gets water vapour through evaporation over water bodies and transpiration by the plants.
- ↳ Availability of water vapour in atmosphere is directly related to temperature.
- ↳ Range of water vapour - 0-4%

**Significance**

- ↳ Possibility of rainfall depends on water vapour content of atmosphere.
- ⊙ Discuss the impact of deforestation on weather and economy?
- ↳ Moderation of atmospheric temperature.
- ↳ Atmospheric water vapour can intercept both

73. Consider the following description:
1. Annual and daily range of temperatures is low.
  2. Precipitation occurs throughout the year.
  3. Precipitation varies between 50cm - 250cm.

What is this type of climate?

- (a) Equatorial climate
- (b) China type climate
- (c) Humid subtropical climate
- (d) Marine West coast climate

**Ans. (d)**

**Exp.** The description best suitable for Marine West Coast Climate. It is also known as Temperate Maritime Climate or Cool Temperate Western Margins (British) Climate.

The annual range of temperature is more in China Type Climate due to effect of continentality while the precipitation range for Equatorial climate is between 150 cm to 250 cm.

**NEXT IAS GS FOUNDATION CLASS REFERENCE**

**Class Notes\_Geography**

bring maritime air masses

**British Type Climate** / Temperate Maritime Climate

↳ western margin of continents between 45° to 65° latitudes.

↳ Columbia region, western Europe, southern Chile, south-east Australia and New Zealand.

↳ This climatic region receives rainfall throughout the year due to influence of westerlies and temperate cyclones

↳ winter's receive more rain than summer season and average rainfall is 100 cm.

↳ Cool summer and mild winters.  
(18-20°C) (5-10°C)

74. With reference to "Coriolis force", which of the following statements is/are correct?

1. It increases with increase in wind velocity.
2. It is maximum at the poles and is absent at the equator.

Select the answer using the code given below:

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

**Ans. (c)**

**Exp.** The rotation of the earth about its axis affects the direction of the wind. This force is called the Coriolis force. It deflects the wind to the right direction in the northern hemisphere and to the left in the southern hemisphere. It is directly proportional to

1. Wind Velocity
2. angle of Latitude

Statement 1 is correct,

As Coriolis force is directly proportional to the wind velocity, it increases with increase in the wind velocity.

Statement 2 is correct

As Coriolis force is directly proportional to the angle of latitude, hence the Coriolis force is strongest near the poles, and absent at the Equator.

**NEXT IAS GS FOUNDATION CLASS REFERENCE**

**Class Notes\_Geography**

**Coriolis Force**

↳ It is caused due to Rotation of Earth

↳ It is responsible for deflection of winds in rightward direction in northern hemisphere and leftward direction in the southern hemisphere

↳ Momentum decreases towards poles.

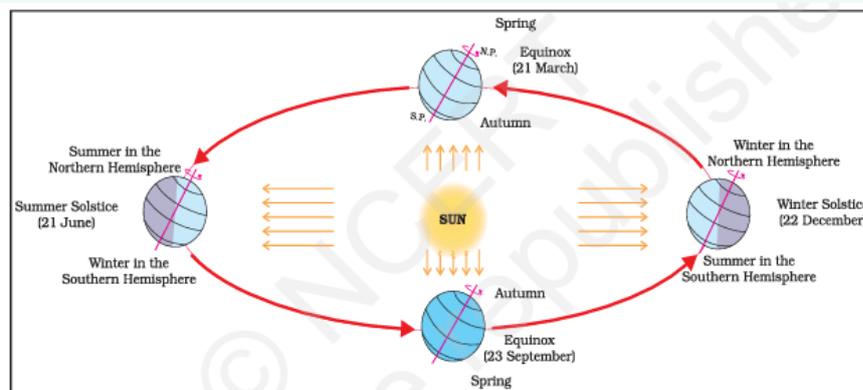
↳ Coriolis force is directly related to latitude and velocity of wind

75. On June 21 every year, which of the following latitude(s) experience(s) a sunlight of more than 12 hours?
1. Equator
  2. Tropic of Cancer
  3. Tropic of Capricorn
  4. Arctic Circle

Select the correct answer using the code given below:

- (a) 1 only
- (b) 2 only
- (c) 3 and 4
- (d) 2 and 4

**Ans. (d)**



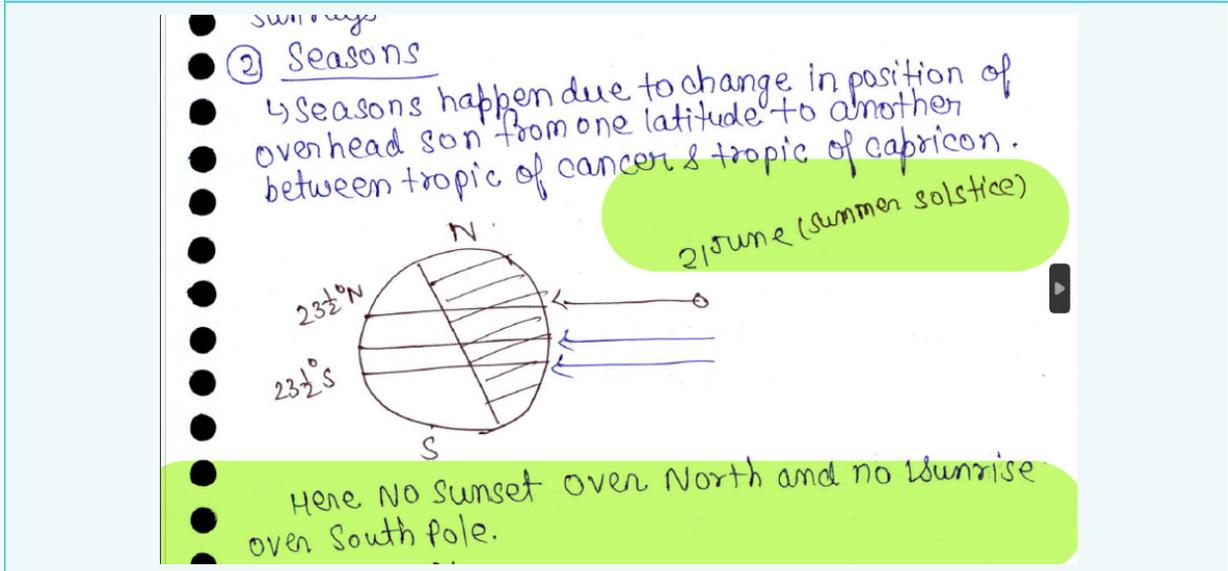
**Exp.**

On June 21 every year, which is the summer solstice in the Northern Hemisphere, the following latitudes experience more than 12 hours of sunlight:

Latitudes north of the Equator (0°) up to the Arctic Circle (66.5°N) will experience more than 12 hours of sunlight. The Arctic Circle (66.5°N) and areas north of it experience continuous daylight, known as the Midnight Sun. Hence D is the correct answer

**NEXT IAS GS FOUNDATION CLASS REFERENCE**

**Class Notes\_Indian Geography**



76. One of the following regions has the world's largest tropical peatland, which holds about three years worth of global carbon emissions from fossil fuels; and the possible destruction of which can exert detrimental effect on the global climate. Which one of the following denotes that region?
- (a) Amazon Basin
  - (b) Congo Basin
  - (c) Kikori Basin
  - (d) Rio de la Plata Basin

**Ans. (b)**

**Exp.** The Congo Basin is home to the world's largest tropical peatlands, along with Brazil and Indonesia. The peat swamp forest of the Congo Basin stores around 29 billion tons of carbon – approximately equivalent to three years' worth of global greenhouse gas emissions – while the Basin as a whole absorbs nearly 1.5 billion tons of carbon dioxide a year.

The Basin stretches across six countries- Cameroon, Central African Republic, Democratic Republic of the Congo, Congo, Equatorial Guinea and Gabon.

77. With reference to perfluoroalkyl and polyfluoroalkyl substances (PFAS) that are used in making many consumer products, consider the following statements:
1. PFAS are found to be widespread in drinking water, food and food packaging materials.
  2. PFAS are not easily degraded in the environment.
  3. Persistent exposure to PFAS can lead to bioaccumulation in animal bodies.

Which of the statements given above are correct?

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

**Ans. (d)**

**Exp.** Statement 1 is correct -

Perfluoroalkyl and polyfluoroalkyl substances (PFAS) are a large, complex group of synthetic chemicals that have been used in consumer products around the world since about the 1950s. They are ingredients in various everyday products. For example, PFAS are used to keep food from sticking to packaging or cookware, make clothes and carpets resistant to stains, and create firefighting foam that is more effective. Their

**PFAS chemicals enter food products via two routes:** the environment (e.g., uptake through polluted water and/or soil) and by direct contact, e.g., packaging materials.

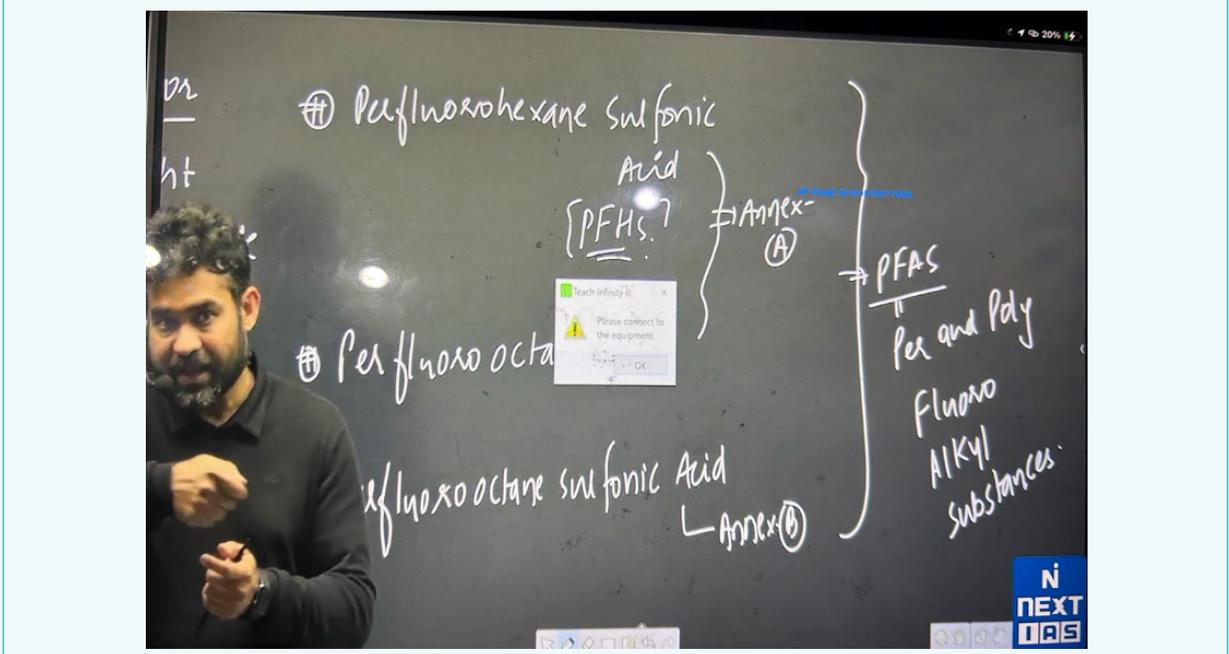
Statement 2 is correct - PFAS molecules have a chain of linked carbon and fluorine atoms. Because the carbon-fluorine bond is one of the strongest, these chemicals do not degrade easily in the environment.

**Statement 3 is correct :** People may encounter different PFAS chemicals in various ways. Over time, people may take in more of the chemicals than they excrete, a process that leads to bioaccumulation in bodies.

Acc. to FDA (US), Accumulation of certain PFAS has also been shown through blood tests to occur in humans and animals.

**NEXT IAS GS FOUNDATION CLASS REFERENCE**

**Class Notes\_Environment**



**78.** Consider the following:

1. Carabid beetles
2. Centipedes
3. Flies
4. Termites
5. Wasps

Parasitoid species are found in how many of the above kind of organisms?

- (a) Only two
- (b) Only three
- (c) Only four
- (d) All five

**Ans. (b)**

**Exp.** A parasitoid is an organism that has young that develop on or within another organism (the host), eventually killing it. Parasitoids have characteristics of both predators and parasites.

Parasitoids include species of wasps, flies (e.g. tachinid flies), beetles and worms (e.g. gordian worms).

Carabid Beetle, Flies and Wasps are parasitoid species

Centipedes and Termites do not exhibit this kind of behaviour.

**79.** Consider the following plants:

1. Groundnut
2. Horse-gram
3. Soybean

How many of the above belong to the pea family?

- (a) Only one
- (b) Only two
- (c) Only three
- (d) None

**Ans. (c)**

**Exp.** All three are correct

Pea Family (Fabaceae) includes -

1. Peanut or groundnut (*Arachis hypogaea*)
2. *Macrotyloma uniflorum* (horsegram)
3. soybean, soy bean, or soya bean (*Glycine max*)

**80.** Consider the following statements:

**Statement-I:**

The Indian Flying Fox is placed under the "vermin" category in the Wild Life (Protection) Act, 1972.

**Statement-II:**

The Indian Flying Fox feeds on the blood of other animals.

Which one of the following is correct in respect of the above statements?

- (a) Both Statement-I and Statement-II are correct and Statement-II explains Statement-I
- (b) Both Statement-I and Statement-II are correct, but Statement-II does not explain Statement-I
- (c) Statement-I is correct, but Statement-II is incorrect
- (d) Statement-I is incorrect, but Statement-II is correct

**Ans. (c)**

**Exp.** The Wild Life (Protection) Amendment Bill of 2021 reduces the number of schedules from six to four and eliminates Schedule V, which previously allowed hunting of species like common crows, fruit bats, rats, and mice without restrictions. Section 62 of the WLPA empowers the central government to declare any wild animal (except those in Schedules I and II) as 'vermin', enabling their unrestricted hunting in specific areas and timeframes.

**Statement I is correct:**

Under the previous scheme, the Indian Flying Fox was categorized as a vermin species. This classification, while not technically accurate, was considered correct under the available options.

In certain regions of India, the Indian Flying Fox (*Pteropus giganteus*) has been designated as vermin, enabling measures to control their impact on fruit crops.

**Statement II is not correct:**

Indian Flying Fox (*Pteropus giganteus*) is a frugivore and feeds primarily on fruits, nectar, and flowers, not on the blood of other animals.

Hence, in accordance with the option available in the question, statement II is absolutely wrong and statement I has to be considered as correct one. Correct answer is Option C.

**NEXT IAS GS FOUNDATION CLASS REFERENCE**

**Class Notes\_Environment**

**WILDLIFE PROTECTION ACT 1972**

**38Y. Constitution of Tiger and other**

**Endangered Species Crime Control Bureau.—**

The Central Government may, for the purposes of this Act, by order published in the Official Gazette, constitute a Tiger and other Endangered Species Crime Control Bureau to be known as the Wildlife Crime Control Bureau consisting of— (a) the Director of Wildlife Preservation—Director ex officio; (b) the Inspector-General of Police—Additional Director; (c) the Deputy Inspector-General of Police—Joint Director; (d) the Deputy Inspector-General of Forests—Joint Director; (e) the Additional Commissioner (Customs and Central Excise)—Joint Director; and (f) such other officers

**PROHIBITION OF TRADE OR COMMERCE IN TROPHIES, ANIMAL ARTICLES, ETC., DERIVED FROM CERTAIN ANIMALS** "Scheduled animal" means an animal specified for the time being in Schedule I or Part II of Schedule II;

Penalties: Upto 3 years or 25000 fine or both

If wrt Schedule I or Part II of Schedule II or Hunting in NP/WLS – Minimum 3 years , max- 7 years

38J – Teasing in Zoo – Upto 2 years or fine

Part VA (trade or commerce in animal articles etc., – 3 to 7 years

Power to alter entries in Schedules. - The Central Government (State Govt for State with PIC of Central Govt, which Central govt can alter any time)

Declaration of certain wild animals to be vermin. - The Central Government may, by notification, declare any wild animal other than those specified in Schedule I and Part II of Schedule II to be vermin for any area and for such period as may be specified therein and so long as such notification is in force, such wild

animal shall be deemed to have been included in Schedule V.

Nothing in this Act shall affect the hunting rights conferred on the Scheduled Tribes of the Nicobar Islands in the Union territory of Andaman and Nicobar Islands

**SCHEDULE VI**

1. Beddomes' cycad (*Cycas beddomei*).
2. Blue Vanda (*Vanda Coerulea*) (blue orchid)  
The juice of flower is used as eye drops against glaucoma, cataract and blindness. Active ingredients of *Vanda coerulea* may fight against the visible signs of ageing skin
3. Kuth (*Saussurea costus*).
4. Ladies slipper orchids (*Paphiopedilium spp.*).
5. Pitcher plant (*Nepenthes khasiana*).
6. Red Vanda (*Renanthera imschootiana*).

**SCHEDULE V**

Common crow; Fruit bats; Mice; Rats

Note: Flying foxes are commonly known as fruit bats.

81. The total fertility rate in an economy is defined as:

- the number of children born per 1000 people in the population in a year.
- the number of children born to a couple in their lifetime in a given population.
- the birth rate minus death rate.
- the average number of live births a woman would have by the end of her child-bearing age.

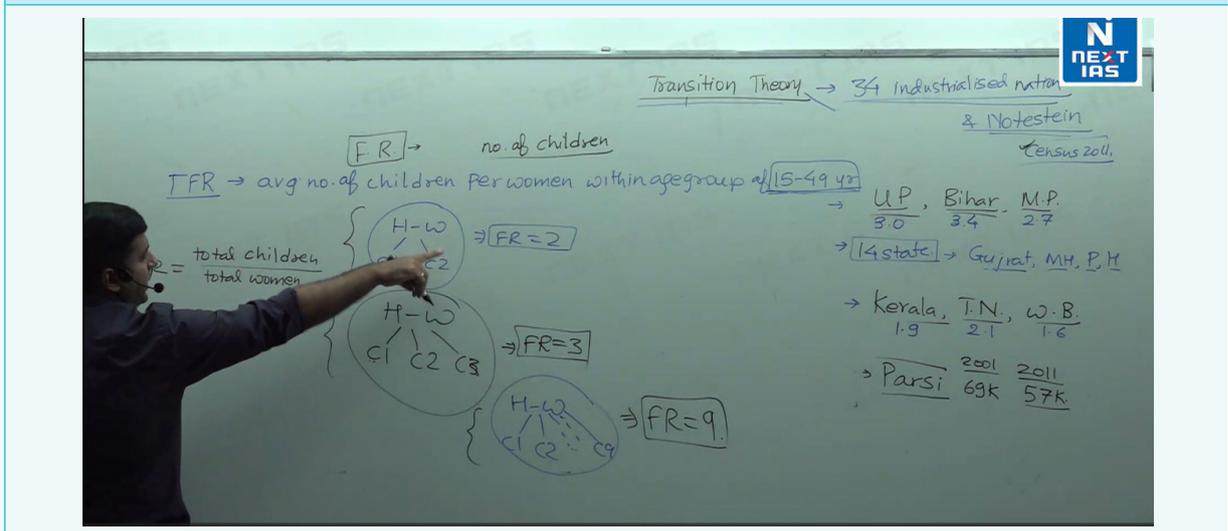
Ans. (d)

Exp. Option D is correct:

Total fertility is therefore a period measure constructed by summing the age-specific fertility rates (ASFR) and multiplying by the length of the age groups used. In simple terms, The total fertility rate (TFR) of a population is the average number of children that are born to a woman over her lifetime if they were to experience the exact current age-specific fertility rates (ASFRs) through their lifetime and they were to live from birth until the end of their reproductive life.

**NEXT IAS GS FOUNDATION CLASS REFERENCE**

**Class Notes\_Indian Society**



82. Consider the following statements:

- In India, Non-Banking Financial Companies can access the Liquidity Adjustment Facility window of the Reserve Bank of India.
- In India, Foreign Institutional Investors can hold the Government Securities (G-Secs).
- In India, Stock Exchanges can offer separate trading platforms for debts.

Which of the statements given above is/are correct?

- 1 and 2 only
- 3 only
- 1, 2 and 3
- 2 and 3 only

Ans. (d)

Exp. **Statement 1 is not correct:** In India, the Liquidity Adjustment Facility (LAF) window of the Reserve Bank of India (RBI) is primarily accessible to scheduled commercial banks and primary dealers. Non-Banking Financial Companies (NBFCs) generally do not have direct access to the LAF.

However, the RBI does have other liquidity management tools and special windows that NBFCs can utilize during times of stress or liquidity shortages. These may include special repo operations or other targeted measures aimed at providing liquidity support to specific sectors.

The reason for restricting direct access to LAF for NBFCs is mainly due to their different regulatory framework and risk profile compared to banks.

**Statement 2 is correct:** Foreign Institutional Investors (FIIs), Non-Resident Indians (NRIs), and Persons of Indian Origin (PIOs) are allowed to invest in the primary and secondary capital markets in India through the portfolio investment scheme (PIS). Under this scheme, FIIs/NRIs can acquire shares/debentures of Indian companies through the stock exchanges in India. Recently The Government has increased the current limit of Foreign Institutional Investors (FII) investment in Government Securities by US \$ 5 billion raising the cap to US \$ 10 billion and the incremental limit of US \$ 5 billion be invested in securities with residual maturity of over five years.

**Statement 3 is correct:** The Debt Market is the market where fixed income securities of various types and features are issued and traded. Debt Markets are therefore, markets for fixed income securities issued by Central and State Governments, Municipal Corporations, Govt. bodies and commercial entities like Financial Institutions, Banks, Public Sector Units, Public Ltd. companies and also structured finance instruments. NSE started offering separate trading platform for debt in 2013.

**83.** In India, which of the following can trade in Corporate Bonds and Government Securities?

1. Insurance Companies
2. Pension Funds
3. Retail Investors

Select the correct answer using the code given below:

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

**Ans. (d)**

**Exp. Option D is correct:**

**1. Insurance Companies:**

Insurance companies can invest in both corporate bonds and government securities.

These investments form part of their portfolio to manage risk and generate returns.

**2. Pension Funds:**

Pension funds, including the Employees' Provident Fund Organization (EPFO) and the National Pension System (NPS), invest in both types of securities.

They aim for stable returns and long-term growth to meet pension obligations.

**3. Retail Investors:**

Retail investors, which include individual investors like you and me, can participate in the secondary market for both corporate bonds and government securities.

Retail investors can buy these securities through brokerage accounts or mutual funds.

**84.** Consider the following:

1. Exchange-Traded Funds (ETF)
2. Motor vehicles
3. Currency swap

Which of the above is/are considered financial instruments?

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

**Ans. (d)**

**Exp.** Financial instruments are assets that can be traded, or they can also be seen as packages of capital that may be traded. Most types of financial instruments provide efficient flow and transfer of capital throughout the world's investors. These assets can be in the form of cash, a contractual right to deliver or receive cash or another type of financial instrument, or evidence of one's ownership in some entity. Financial instruments may be divided into two types: cash instruments and derivative instruments.

**Statement 1 is correct:** Exchange traded funds are part of derivative instruments of financial instruments.

**Statement 2 is not correct:** Motor vehicle is not considered as a financial instrument.

**Statement 3 is correct:** Currency swaps is a transaction between two financial institutions that occurs in different currencies. It is a financial instrument used by companies and institutions to secure better loan rates in foreign currencies than they might be able to obtain directly in the foreign market.

**85.** With reference to the sectors of the Indian economy, consider the following pairs:

	<b>Economic activity</b>	<b>Sector</b>
1.	Storage of agricultural produce	Secondary
2.	Dairy farm	Primary
3.	Mineral exploration	Tertiary
4.	Weaving cloth	Secondary

How many of the pairs given above are correctly matched?

- (a) Only one
- (b) Only two
- (c) Only three
- (d) All four

**Ans. (c)**

**Exp. Option (c) is the correct answer:**

A sector is an area of the economy in which businesses share the same or related business activity, product, or service. Sectors represent a large grouping of companies with similar business activities, such as the extraction of natural resources and agriculture.

Storage of Agriculture Produce- Tertiary Sector

Dairy Farm- Primary Sector

Mineral Exploration- Tertiary Sector

Weaving Cloth- Secondary Sector (Manufacturing Sector)

**86.** Consider the following materials:

- 1. Agricultural residues
- 2. Corn grains
- 3. Wastewater treatment sludge
- 4. Wood mill waste

Which of the above can be used as feedstock for producing Sustainable Aviation Fuel?

- (a) 1 and 2 only
- (b) 2 and 4 only
- (c) 1, 2, 3 and 4
- (d) 1, 3 and 4 only

**Ans. (c)**

**Exp. About Sustainable Aviation Fuel (SAF):** Sustainable Aviation Fuel is a biofuel used to power aircraft that has similar properties to conventional jet fuel but with a smaller carbon footprint. Depending on the feedstock and technologies used to produce it, SAF can reduce life cycle GHG emissions dramatically compared to conventional jet fuel.

**Option (d) is the correct answer:** The feedstock that can be used for producing SAF includes **corn grain**, oil seeds, algae, other fats, oils, and greases, **agricultural residues**, forestry residues, **wood mill waste**, municipal solid waste streams, wet wastes (manures, **wastewater treatment sludge**), dedicated energy crops, etc.

87. With reference to physical capital in Indian economy, consider the following pairs:

	Items	Category
1.	Farmer's plough	Working capital
2.	Computer	Fixed capital
3.	Yarn used by the weaver	Fixed capital
4.	Petrol	Working capital

How many of the above pairs are correctly matched?

- (a) Only one
- (b) Only two
- (c) Only three
- (d) All four

**Ans. (a)**

**Exp. Option A is correct:**

Physical capital is one of what economists call the three main factors of production. It consists of tangible, human-made goods that assist in the process of creating a product or service. The machinery, buildings, office or warehouse supplies, vehicles, and computers that a company owns are all considered part of its physical capital.

Farmer's Plough- Fixed capital

Computer - Fixed Capital

Yarn used by weaver- Working Capital

Petrol - Intermediate goods

88. Which one of the following words/phrases is most appropriately used to denote "an interoperable network of 3D virtual worlds that can be accessed simultaneously by millions of users, who can exert property rights over virtual items."?

- (a) Big data analytics
- (b) Cryptography
- (c) Metaverse
- (d) Virtual matrix

**Ans. (c)**

**Exp. Option (c) is the correct answer:** Metaverse is an interoperable network of 3D virtual worlds that can be accessed simultaneously by millions of users who can exert property rights over virtual items. The metaverse is a digital reality that combines aspects of social media, online gaming, augmented reality (AR), virtual reality (VR), and cryptocurrencies to allow users to interact virtually.

89. With reference to the rule/rules imposed by the Reserve Bank of India while treating foreign banks, consider the following statements:

1. There is no minimum capital requirement for wholly owned banking subsidiaries in India.
2. For wholly owned banking subsidiaries in India, at least 50% of the board members should be Indian nationals.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

**Ans. (b)**

**Exp. Statement 1 is not correct:** Foreign banks were permitted to establish presence by way of setting up a wholly owned banking subsidiary (WOS) or conversion of the existing branches into a WOS. The guidelines covered, inter alia, the eligibility criteria of the applicant foreign banks such as ownership pattern, financial soundness, supervisory rating and the international ranking. The WOS was to have a minimum capital requirement of Rs.300 crore.

**Statement 2 is correct :** In order to ensure that the board of directors of the WOS of foreign bank set up in India acts in the best interest of the local institution, RBI may, in line with the best practices in other countries, mandate that (i) not less than 50 percent of the directors should be Indian nationals resident in India, (ii) not less than 50 percent of the directors should be non-executive directors, (iii) a minimum of one-third of the directors should be totally independent of the management of the subsidiary in India, its parent or associates and (iv) the directors shall conform to the 'Fit and Proper' criteria as laid down in our extant guidelines contained in RBI circular dated June 25, 2004, as amended from time to time.

**90.** With reference to Corporate Social Responsibility (CSR) rules in India, consider the following statements:

1. CSR rules specify that expenditures that benefit the company directly or the employees will not be considered as CSR activities.
2. CSR rules do not specify minimum spending on CSR activities.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

**Ans. (a)**

**Exp.** Corporate social responsibility (CSR) is a management concept that describes how a company contributes to the well-being of communities and society through environmental and social measures. CSR plays a crucial role in how brands are perceived by customers and their target audience. It may also help attract employees and investors who prioritize the CSR goals a company has identified.

Enactment of Companies Act, 2013 by the Ministry of Corporate Affairs, Government of India was one of the world's largest experiments of introducing the CSR as a mandatory provision by imposing statutory obligation on Companies to take up CSR projects towards social welfare activities. This has made India the only country which has regulated and mandated CSR for some select categories of companies registered under the Act.

**Statement 1 is correct:** The CSR projects or programs or activities that benefit only the employees of the company and their families shall not be considered as CSR activities in accordance with section 135 of the Act.

**Statement 2 is not correct:** Every company which needs to comply with the CSR provisions have to spend 2% of the average net profits made during the preceding 3 years as per the CSR policy. Net profit for computation CSR Expenditure to be incurred will same as described above.

**91.** With reference to radioisotope thermoelectric generators (RTGs), consider the following statements:

1. RTGs are miniature fission reactors
2. RTGs are used for powering the onboard systems of spacecrafts.
3. RTGs can use Plutonium-238, which is a by-product of weapons development.

Which of the statements given above are correct?

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

**Ans. (b)**

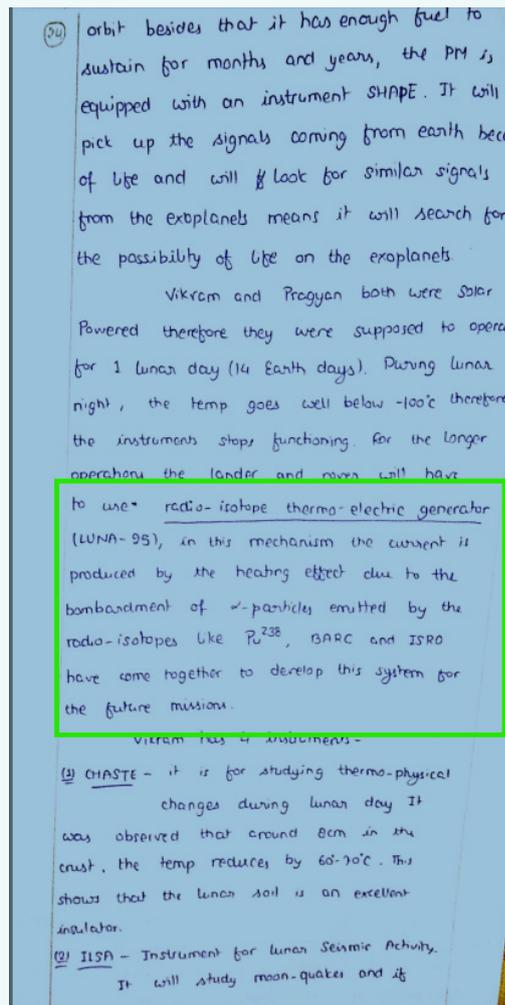
**Exp. Statement 1 is not correct:** RTGs are not fission reactors. They provide electrical power using heat from the natural radioactive decay of plutonium-238.

**Statement 2 is correct:** Radioisotope Thermoelectric Generators (RTGs) are lightweight, compact spacecraft power systems that are extraordinarily reliable.

**Statement 3 is correct:** Currently NASA uses radioisotope thermoelectric generators, or RTGs, to provide electrical power for certain spacecraft by converting the heat generated by the decay of plutonium-238 (Pu-238) fuel into electricity using devices called thermocouples. Plutonium-238 is also a by-product of weapons development.

**NEXT IAS GS FOUNDATION CLASS REFERENCE**

**Class Notes\_Science and Technology**



92. Consider the following statements:

**Statement-I:**

Giant stars live much longer than dwarf stars.

**Statement-II:**

Compared to dwarf stars, giant stars have a greater rate of nuclear reactions.

Which one of the following is correct in respect of the above statements?

- (a) Both Statement-I and Statement-II are correct and Statement-II explains Statement-I
- (b) Both Statement-I and Statement-II are correct but Statement-II does not explain Statement-I
- (c) Statement-I is correct, but Statement-II is incorrect
- (d) Statement-I is incorrect, but Statement-II is correct

**Ans. (d)**

**Exp. Statement I is not correct:** Giant stars have shorter lifespans compared to dwarf stars because they burn their fuel much more quickly.

**Statement II is correct:** The more massive a star, the greater the rate at which nuclear reactions can take place in the core. More massive stars have a stronger gravitational force acting inwards so their core gets hotter. The higher temperatures mean that the nuclear reactions occur at a much greater rate in massive stars.

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**93.** Which one of the following is synthesised in human body that dilates blood vessels and increase blood flow?

- (a) Nitric oxide
- (b) Nitrous oxide
- (c) Nitrogen dioxide
- (d) Nitrogen pentoxide

**Ans. (a)**

**Exp.** Nitric oxide is produced naturally by the human body and is one of the most important molecules for blood vessel health. Nitric oxide has earned reput as a potent vasodilator, meaning it relaxes the inner muscles of the blood vessels, causing the vessels to widen. In this way, nitric oxide increases blood flow and lowers blood pressure

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**94.** Consider the following activities:

- 1. Identification of narcotics on passengers at airports or in aircraft
- 2. Monitoring of precipitation
- 3. Tracking the migration of animals

In how many of the above activities can the radars be used?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

**Ans. (c)**

**Exp. About Radar:** Radar is an electromagnetic sensor used for detecting, locating, tracking, and recognizing objects of various kinds at considerable distances. It operates by transmitting electromagnetic energy toward objects, commonly referred to as targets, and observing the echoes returned from them.

**Statement 1 is correct:** Millimeter wave radar technology can be used as part of security systems used in airports to detect concealed items, including narcotics.

**Statement 2 is correct:** Weather radar is a remote sensing instrument that has been increasingly used to estimate precipitation for a variety of hydrological and meteorological applications, including real-time flood forecasting, severe weather monitoring and warning, and short-term precipitation forecasting.

**Statement 3 is correct:** Radar technology can provide information on animal movements over considerable distances. This helps researchers understand migration patterns, behavior, and potential impacts on ecosystems

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**95.** Consider the following aircraft:

- 1. Rafael
- 2. MiG-29
- 3. Tejas MK-1

How many of the above are considered fifth generation fighter aircraft?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

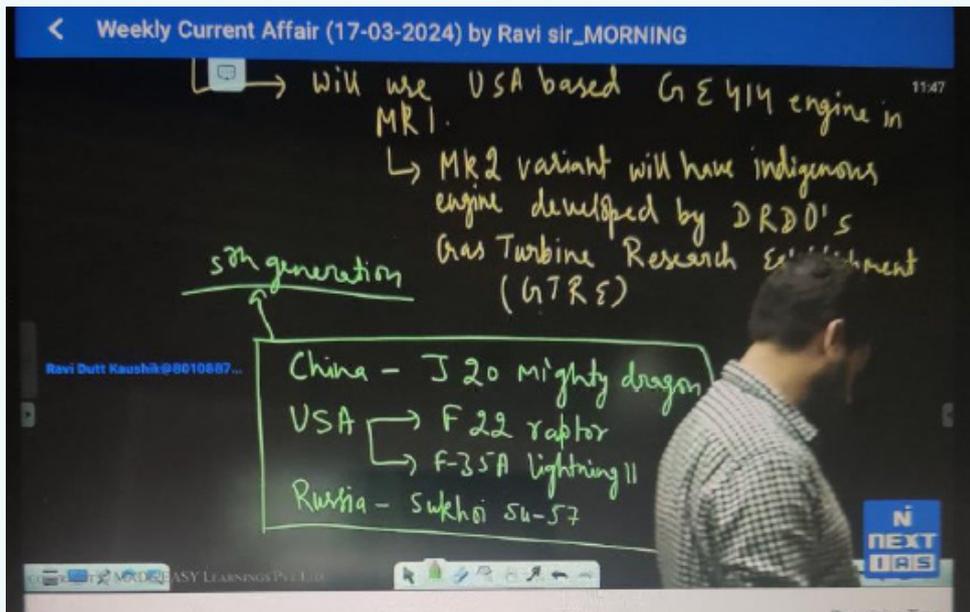
**Ans. (d)**

**Exp. Context:** Union Cabinet recently cleared a Rs 15,000 crore project to design and develop the Advanced Medium Combat Aircraft (AMCA), India's fifth-generation fighter multirole fighter jet.

**1, 2 and 3 are not correct:** Rafael and Tejas MK-1 are 4.5th generation aircrafts, whereas the MiG-29 is a fourth-generation jet fighter aircraft. Hence, option (d) is the correct answer.

**NEXT IAS GS FOUNDATION CLASS REFERENCE**

**Class Notes\_Weekly Current Affairs**



**96.** In which of the following are hydrogels used?

1. Controlled drug delivery in patients
2. Mobile air-conditioning systems
3. Preparation of industrial lubricants.

**Select the correct answer using the code given below:**

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

**Ans. (d)**

**Exp. About Hydrogel:** A hydrogel is a biocompatible hydrophilic polymer that resembles soft tissue. Hydrogels can retain a large amount of water in a swollen state within its network from surface tension and capillary forces.

**1 is correct:** The unique physical properties of hydrogels have sparked particular interest in their use in drug delivery applications. Their highly porous structure can easily be tuned by controlling the density of cross-links in the gel matrix and the affinity of the hydrogels for the aqueous environment in which they are swollen. Their porosity also permits loading of drugs into the gel matrix and subsequent drug release at a rate dependent on the diffusion coefficient of the small molecule or macromolecule through the gel network.

**2 is correct:** Due to their water-absorbing and releasing capabilities, hydrogels have the potential to be utilized in mobile air-conditioning systems. This characteristic enables them to control temperature and humidity, thus making them suitable for cooling purposes.

**3 is correct:** Hydrogels have also received extensive attention as functional lubricants because of their excellent anti-friction and anti-wear properties.

97. Which one of the following is the exhaust pipe emission from Fuel Cell Electric Vehicles, powered by hydrogen?
- Hydrogen peroxide
  - Hydronium
  - Oxygen
  - Water vapour

**Ans. (d)**

**Exp. Option (d) is the correct answer:** Fuel cell electric vehicles (FCEVs) are powered by hydrogen. FCEVs use a propulsion system similar to that of electric vehicles, where energy stored as hydrogen is converted to electricity by the fuel cell. Unlike conventional internal combustion engine vehicles, these vehicles produce no harmful tailpipe emissions - They only emit water vapor and warm air.

**NEXT IAS GS FOUNDATION CLASS REFERENCE**

**Class Notes Science and Technology**

optical mesh (or) intersatellite link. → Kuiper has achieved the data transmission speed at 100 Gbps. → It will ↑ throughput, ↓ latency. → Kuiper & Starlink are using QPSK technology. Simultaneous connectivity with multiple satellites. Kuiper: 100Mbps - 10Gbps → laser is not travelling in any medium.

★ XPOSAT  
650km orbit → X-ray polarisation satellite. → was launched by PSLV :- 04 stages SSLV → basis for POEM-3 :- PSLV orbital experiment module. → 4th stage was brought down to 350km → 10 different devices including the fuel cells. 
$$H_2O \xrightarrow{\text{split}} O_2 + H_2 \xrightarrow{\text{to form}} H_2O$$

Zero orbital debris program  
↓  
passivated  
↓  
Removal of the fuel.  
↓  
burnt by friction.

XPOSAT will study.  
X-ray will study.  
→ Quasars  
→ Black hole  
→ Neutron stars  
→ Magnetar  
At the centre of galaxy, there is black hole → feeding hungry.  
light ← eats other stars  
Name: → some reason for

98. Recently the term “pumped-storage hydropower” is actually and appropriately discussed in the context of which one of the following?
- Irrigation of terraced crop fields
  - Lift irrigation of cereal crops
  - Long duration energy storage
  - Rainwater harvesting system

**Ans. (c)**

**Exp. Option (c) is the correct answer:** Pumped storage hydropower (PSH) is a type of hydroelectric energy storage. It is a configuration of two water reservoirs at different elevations that can generate power as water moves down from one to the other (discharge), passing through a turbine. The system also requires power as it pumps water back into the upper reservoir (recharge). PSH acts similarly to a giant battery, because it can store power and then release it when needed.

**99.** "Membrane Bioreactors" are often discussed in the context of

- (a) Assisted reproductive technologies
- (b) Drug delivery nanotechnologies
- (c) Vaccine production technologies
- (d) Wastewater treatment technologies

**Ans. (d)**

**Exp. Option (d) is the correct answer:** Membrane bioreactor (MBR) technology has recently emerged as a wastewater treatment technology of choice over the activated sludge process (ASP), which has been the conventional municipal wastewater technology over the last century. An MBR is a hybrid of a conventional biological treatment system and physical liquid–solid separation using membrane filtration in one system.

**100.** With reference to the Indian economy, "Collateral Borrowing and Lending Obligations" are the instruments of:

- (a) Bond market
- (b) Forex market
- (c) Money market
- (d) Stock market

**Ans. (c)**

**Exp. Option (c) is the correct answer:**

A collateralized borrowing and lending obligation (CBLO) is a money market instrument that represents an obligation between a borrower and a lender concerning the terms and conditions of a loan.

CBLOs allow those restricted from using the interbank call money market in any given specific country to participate in the short-term money markets.

In the CBLO market, financial entities can avail short term loans by providing prescribed securities as collateral. In terms of functioning and objectives, the CBLO market is almost similar to the call money market.

