

2024

UPSC

CIVIL SERVICES EXAMINATION  
(PRELIMS)

PAPER

1



## General Instructions

1. This Test Booklet contains **100** items (questions). Each item comprises four responses (answers). You will select the response which you want to mark on the Answer Sheet. In case you feel that there is more than one correct response, mark the response which you consider the best. In any case, choose **ONLY ONE** response for each item.
2. You have to mark all your responses **ONLY** on the separate OMR Sheet provided.
3. All items carry equal marks.
4. **Penalty for wrong answers:**
  - (i) There are four alternatives for the answer to every question. For each question for which a wrong answer has been given by the candidate, **one-third (0.33)** of the marks assigned to that question will be deducted as penalty.
  - (ii) If a candidate gives more than one answer, it will be treated as a **wrong answer** even if one of the given answers happens to be correct and there will be same penalty as above to that question.
  - (iii) If a question is left blank, i.e., no answer is given by the candidate, there will be no penalty for that question.

1. **How many Delimitation Commissions have been constituted by the Government of India till December 2023?**
  - (a) One
  - (b) Two
  - (c) Three
  - (d) Four
2. **The Constitution (71<sup>st</sup> Amendment) Act, 1992 amends the Eighth Schedule 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
3. **Consider the following pairs :**

	Party	Its Leader
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
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 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
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.
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
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

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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) Operation Sankalp  
(b) Operation Maitri  
(c) Operation Sadbhavana  
(d) Operation Madad

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

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

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

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

13. Which one of the following is a work attributed to playwright Bhasa?

(a) *Kavyalankara* (b) *Natyashastra*  
(c) *Madhyama-vyayoga* (d) *Mahabhashya*

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:

(a) *Prajnaparamita Sutra* (b) *Visuddhimagga*  
(c) *Sarvastivada Vinaya* (d) *Lalitavistara*

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

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

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

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

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

	Army	Airforce	Navy
1.	Brigadier	Air Commander	Commodore
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

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?

1. Governor of the Constituent State  
2. Chief Minister of the Constituent State  
3. Three Members to be nominated by the President of India  
4. 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

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

1. Provisions will come into effect from the 18<sup>th</sup> Lok Sabha.  
2. This will be in force for 15 years after becoming an Act.  
3. 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 only

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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

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.

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

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 Houses 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

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

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

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

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

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

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

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 a 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 is incorrect
- (d) Statement-I is incorrect, but Statement-II is correct

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) in 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

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

1. Nayaputta
2. Shakyamuni
3. Tathagata



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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

35. Consider the following information:

	Archaeological Site	State	Description
1.	Chandraketurgarh	Odisha	Trading Port town
2.	Inamgaon	Maharashtra	Chalcolithic site
3.	Mangadu	Kerala	Megalithic site
4.	Salihundam	Andhra Pradesh	Rock-cut cave shrines

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

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

36. Who of the following rulers of medieval India gave permission to the Portuguese to build a fort at Bhatkal?

- (a) Krishnadevaraya
- (b) Narasimha Saluva
- (c) Muhammad Shah III
- (d) Yusuf Adil Shah

37. With reference to revenue collection by Cornwallis, consider the following statements:

- Under the Ryotwari Settlement of revenue collection, the peasants were exempted from revenue payment in case of bad 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?

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

38. Consider the following statements:

- There are no parables in Upanishads.
- 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

39. Consider the following statements:

- India is a member of the International Grains Council.
- 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

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

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'état 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

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

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

- He/She shall not preside.
- He/She shall not have the right to speak.
- 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

44. With reference to the Indian Parliament, consider the following statements :

- A bill pending in the Lok Sabha lapses on its dissolution.
- A bill passed by the Lok Sabha and pending in the Rajya Sabha lapses on the dissolution of the Lok Sabha.
- 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

45. With reference to the Parliament of India, consider the following statements :

- Prorogation of a House by the President of India does not require the advice of the Council of Ministers.
- 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.
- 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

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-II explains Statement-I

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- (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

### 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

### 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

### 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

### 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

### 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

### 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-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

### 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

### 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

### 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) Côte d'Ivoire and Ghana
- (d) Madagascar and Mozambique

### 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

### 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

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- (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

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

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) All three (d) None

60. Consider the following information :

	Region	Name of the mountain range	Type of mountain
1.	Central Asia	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

61. The organisms "Cicada, Froghopper and Pond skater" are:

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

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

63. Consider the following pairs :

	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

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

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

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.

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

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

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

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



## General Studies Paper-I : 2024

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) 1 and 3 only
- (d) 1, 2 and 3

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

73. Consider the following description :

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

What is this type of climate?

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

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

1. It increases with increase in linear 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

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

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

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 material.
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

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

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) All three
- (d) None

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

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

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

82. Consider the following statements :

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

Which of the statements given above is/are correct?

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

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

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

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

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

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How many of the pairs given above are correctly matched?

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

86. Consider the following materials :

1. Agricultural residues
2. Corn grain
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) 3 and 4 only  
(c) 1, 2, 3 and 4 (d) 1, 3 and 4 only

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

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

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

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 its 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

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

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

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

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

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

95. Consider the following aircraft:

1. Rafale
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

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

97. Which one of the following is the exhaust pipe emission from Fuel Cell Electric Vehicles, powered by hydrogen?

- (a) Hydrogen peroxide (b) Hydronium  
(c) Oxygen (d) Water vapour

98. Recently, the term "pumped-storage hydropower" is actually and appropriately discussed in the context of which one of the following?

- (a) Irrigation of terraced crop fields  
(b) Lift irrigation of cereal crops  
(c) Long duration energy storage  
(d) Rainwater harvesting system

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

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



OMR SHEET

Darken the circle for each question.

Q.No.	Response
1.	(a) (b) (c) (d)
2.	(a) (b) (c) (d)
3.	(a) (b) (c) (d)
4.	(a) (b) (c) (d)
5.	(a) (b) (c) (d)
6.	(a) (b) (c) (d)
7.	(a) (b) (c) (d)
8.	(a) (b) (c) (d)
9.	(a) (b) (c) (d)
10.	(a) (b) (c) (d)
11.	(a) (b) (c) (d)
12.	(a) (b) (c) (d)
13.	(a) (b) (c) (d)
14.	(a) (b) (c) (d)
15.	(a) (b) (c) (d)
16.	(a) (b) (c) (d)
17.	(a) (b) (c) (d)
18.	(a) (b) (c) (d)
19.	(a) (b) (c) (d)
20.	(a) (b) (c) (d)
21.	(a) (b) (c) (d)
22.	(a) (b) (c) (d)
23.	(a) (b) (c) (d)
24.	(a) (b) (c) (d)
25.	(a) (b) (c) (d)

Q.No.	Response
26.	(a) (b) (c) (d)
27.	(a) (b) (c) (d)
28.	(a) (b) (c) (d)
29.	(a) (b) (c) (d)
30.	(a) (b) (c) (d)
31.	(a) (b) (c) (d)
32.	(a) (b) (c) (d)
33.	(a) (b) (c) (d)
34.	(a) (b) (c) (d)
35.	(a) (b) (c) (d)
36.	(a) (b) (c) (d)
37.	(a) (b) (c) (d)
38.	(a) (b) (c) (d)
39.	(a) (b) (c) (d)
40.	(a) (b) (c) (d)
41.	(a) (b) (c) (d)
42.	(a) (b) (c) (d)
43.	(a) (b) (c) (d)
44.	(a) (b) (c) (d)
45.	(a) (b) (c) (d)
46.	(a) (b) (c) (d)
47.	(a) (b) (c) (d)
48.	(a) (b) (c) (d)
49.	(a) (b) (c) (d)
50.	(a) (b) (c) (d)

Q.No.	Response
51.	(a) (b) (c) (d)
52.	(a) (b) (c) (d)
53.	(a) (b) (c) (d)
54.	(a) (b) (c) (d)
55.	(a) (b) (c) (d)
56.	(a) (b) (c) (d)
57.	(a) (b) (c) (d)
58.	(a) (b) (c) (d)
59.	(a) (b) (c) (d)
60.	(a) (b) (c) (d)
61.	(a) (b) (c) (d)
62.	(a) (b) (c) (d)
63.	(a) (b) (c) (d)
64.	(a) (b) (c) (d)
65.	(a) (b) (c) (d)
66.	(a) (b) (c) (d)
67.	(a) (b) (c) (d)
68.	(a) (b) (c) (d)
69.	(a) (b) (c) (d)
70.	(a) (b) (c) (d)
71.	(a) (b) (c) (d)
72.	(a) (b) (c) (d)
73.	(a) (b) (c) (d)
74.	(a) (b) (c) (d)
75.	(a) (b) (c) (d)

Q.No.	Response
76.	(a) (b) (c) (d)
77.	(a) (b) (c) (d)
78.	(a) (b) (c) (d)
79.	(a) (b) (c) (d)
80.	(a) (b) (c) (d)
81.	(a) (b) (c) (d)
82.	(a) (b) (c) (d)
83.	(a) (b) (c) (d)
84.	(a) (b) (c) (d)
85.	(a) (b) (c) (d)
86.	(a) (b) (c) (d)
87.	(a) (b) (c) (d)
88.	(a) (b) (c) (d)
89.	(a) (b) (c) (d)
90.	(a) (b) (c) (d)
91.	(a) (b) (c) (d)
92.	(a) (b) (c) (d)
93.	(a) (b) (c) (d)
94.	(a) (b) (c) (d)
95.	(a) (b) (c) (d)
96.	(a) (b) (c) (d)
97.	(a) (b) (c) (d)
98.	(a) (b) (c) (d)
99.	(a) (b) (c) (d)
100.	(a) (b) (c) (d)

# ANSWERS

## 1. Option (d) is correct

The Delimitation Commissions in India are responsible for redrawing the boundaries of the various parliamentary and assembly constituencies based on the latest census to ensure fair representation. The Government of India has constituted four Delimitation Commissions to date.

First Delimitation Commission was established in 1952.

Post-independence, this commission was set up to delimit the constituencies for the first general elections.

Second Delimitation Commission was established in 1962.

Third Delimitation Commission was established in 1972.

Fourth Delimitation Commission was established in 2002.

## 2. Option (a) is correct

The Constitution (71<sup>st</sup> Amendment) Act, 1992 amended the Eighth Schedule of the Indian Constitution to include Konkani, Manipuri, and Nepali as officially recognized languages. Maithili was added later by the 92<sup>nd</sup> Amendment Act in 2003.

## 3. Option (b) is correct

Dr. Shyama Prasad Mukherjee was the founder of the Bharatiya Jana Sangh in 1951, which was the precursor to the Bharatiya Janata Party (BJP).

C. Rajagopalachari was not associated with the Socialist Party. He founded the Swatantra Party in 1959 to oppose the socialist policies of the Indian National Congress.

Jagjivan Ram founded the Congress for Democracy in 1977, which later merged with the Janata Party.

Acharya Narendra Dev was a prominent leader of the Congress Socialist Party and the Socialist Party of India. He was not associated with the Swatantra Party, which was founded by C. Rajagopalachari.

## 4. Option (d) is correct

Part IX A of the Constitution of India, titled "The Municipalities", was added by the 74<sup>th</sup> Amendment Act in 1992. It covers provisions related to the constitution, powers, and responsibilities of municipal bodies.

Part XVIII of the Constitution, titled "Emergency Provisions", includes Articles 352 to 360. It deals with provisions for national, state, and financial emergencies.

Part XX of the Constitution, titled "Amendment of the Constitution", contains Article 368, which provides the procedure for amending the Constitution.

## 5. Option (c) is correct

The Constitution of India divides subjects into three lists – Union List, State List, and Concurrent List – under the Seventh Schedule which determine the distribution of powers and responsibilities between the Union and State governments.

**Union List (List I):** Contains subjects on which only the central government can legislate.

**State List (List II):** Contains subjects on which only the state governments can legislate.

**Concurrent List (List III):** Contains subjects on which both central and state governments can legislate.

Entry 81 of the Union List specifically mentions "Quarantine" and provides that the central government has the authority to legislate on this subject to manage and control diseases across state borders.

Inter-State trade and commerce falls under Entry 42 of the Union List. The central government regulates trade and commerce among the states to ensure free flow and uniformity.

Inter-State migration and the movement of persons fall under

Entry 81 of the Union List. The central government can legislate on matters of migration between states.

Corporation tax is under Entry 85 of the Union List. The central government has the exclusive power to impose taxes on the income of companies.

## 6. Option (d) is correct

The Right to Privacy in India has been placed under Article 21 of the Constitution of India by the Supreme Court.

Article 21: "No person shall be deprived of his life or personal liberty except according to procedure established by law".

The Supreme Court, in its landmark judgement in the case of Justice K. S. Puttaswamy vs Union of India (2017), recognized the Right to Privacy as a fundamental right under Article 21. The Court held that the right to privacy is intrinsic to the right to life and personal liberty guaranteed by this article.

● Article 15: Prohibits discrimination on grounds of religion, race, caste, sex or place of birth.

● Article 16: Guarantees equality of opportunity in matters of public employment.

● Article 19: Guarantees certain freedoms like speech and expression, assembly, etc.

## 7. Option (d) is correct

The Chief of Defence Staff (CDS) is the principal military authority and senior-most appointment of the Indian Armed Forces. Deemed the overall professional head of India's three armed services, namely, the Indian Army, the Indian Navy and the Indian Air Force, the CDS is the highest-ranking military officer in service, responsible for overseeing inter-service jointness across all disciplines related to military functioning.

**CDS serves multiple functions like:**

The CDS acts as the permanent chairman of the Chiefs of Staff Committee.

The CDS does not have direct operational command authority over the three service chiefs. The service chiefs continue to exercise operational command over their respective services. The CDS acts as a coordinator and advisor, promoting jointness and integration among the services.

The CDS serves as the principal military advisor to the Defence Minister on matters involving all three services.

## 8. Option (c) is correct

Operation Sadbhavana is a unique initiative undertaken by the Indian Army in Jammu & Kashmir and the North East regions. It focuses on winning the hearts and minds of the local population through various developmental activities and assistance which includes providing education, healthcare, infrastructure development, and promoting skill development initiatives.

● Operation Sankalp was launched by the Indian Navy to ensure maritime security in the Persian Gulf and the Gulf of Oman.

● Operation Maitri refers to the Indian Armed Forces' humanitarian assistance and disaster relief operations to assist friendly countries. A notable example was the aid provided to Nepal during the 2015 earthquake.

● Operation Madad is the Indian Navy's effort to provide humanitarian assistance and disaster relief during natural calamities, both within India and to neighbouring countries.

## 9. Option (a) is correct

The longest international border in the world is between Canada and the United States. It stretches for 8,891 kilometres (5,525 miles) and spans across land and water.

## General Studies Paper-I : 2024

### 10. Option (c) is correct

The Ethics Committee in the Lok Sabha is responsible for examining the conduct of its members and ensuring they adhere to ethical standards.

The Ethics Committee in the Lok Sabha was initially constituted as an ad-hoc committee to handle specific issues of ethical conduct. Over time, its role was formalised and it became a permanent committee to continuously oversee the ethical behaviour of the members.

Complaints regarding the unethical conduct of a member of the Lok Sabha can be made by any individual, not just members of the Lok Sabha. This provision allows for greater transparency and accountability as it enables the public to also lodge complaints..

The Ethics Committee is restricted from taking up matters that are sub-judice, meaning those that are currently under judicial consideration.

### 11. Option (d) is correct

Dr. Sachchidananda Sinha was the Provisional President of the Constituent Assembly of India before Dr. Rajendra Prasad took over as the permanent President.

C. Rajagopalachari served as the last Governor-General of independent India.

Dr. B. R. Ambedkar: He was the Chairman of the Drafting Committee and played a pivotal role in framing the Constitution.

T. T. Krishnamachari was a member of the Constituent Assembly and later served as a prominent minister in independent India.

### 12. Option (a) is correct

The Government of India Act, 1935, proposed the creation of an All-India Federation that would include both British Indian provinces and princely states. This federation was intended to bring together all parts of British India under a single central government.

The Act retained Defence and Foreign Affairs as reserved subjects under the direct control of the British Governor-General, not the federal legislature. The federal legislature did not have authority over these critical areas.

### 13. Option (c) is correct

● Bhasa was an ancient Indian playwright believed to have predated Kalidasa. Madhyama-vyayoga (meaning 'The Middle One') is one of Bhasa's famous plays. It's part of a trilogy and tells a story from the Mahabharata.

● Kavyalankara is a work on Sanskrit poetics by the renowned scholar Bhamaha.

● Natyashastra is the foundational text on Indian classical dance and drama, attributed to the sage Bharata Muni.

● Mahabhashya is a comprehensive commentary on the Sanskrit grammar of Patanjali, based on Panini's Ashtadhyayi.

### 14. Option (c) is correct

Sanghabhuti was a prominent Buddhist scholar known for his work on the Sarvastivada school of Buddhism, particularly their Vinaya texts. Vinaya texts focus on monastic rules and discipline. He travelled to China to translate these texts, making them accessible to Chinese Buddhists.

● **Prajnaparamita Sutra:** These sutras are central to Mahayana Buddhism and focus on the concept of 'emptiness' (sunyata). While important, they are not primarily associated with Sanghabhuti's work.

● **Visuddhimagga:** This text, meaning 'Path of Purification', is a comprehensive Theravada Buddhist treatise written by Buddhaghosa.

● **Lalitavistara:** Lalitavistara Sūtra is a Sanskrit Mahayana Buddhist sutra that tells the story of Gautama Buddha from the time of his descent from Tushita until his first sermon in the

Deer Park at Sarnath near Varanasi. The text is also said to be a compilation of various works by no single author and includes materials from the Sarvastivada and the Mahayana traditions.

### 15. Option (b) is correct

Out of the given four properties listed, two (Shantiniketan and Sacred Ensembles of the Hoysalas) were included in the World Heritage List (WHS) in 2023.

Rani-ki-Vav were added to the World Heritage Site in 2014 and the Mahabodhi Temple Complex at Bodhgaya in 2002 respectively.

### 16. Option (d) is correct

Article 368 of the Constitution of India provides the procedure for the amendment of the Constitution. According to this article, the Parliament may amend any provision of the Constitution by way of Addition, Variation, Repeal.

The Parliament can add new provisions or articles to the Constitution.

The Parliament can vary or modify existing provisions of the Constitution. This includes changing the wording, altering the scope, or making adjustments to adapt to new circumstances.

The Parliament has the authority to repeal any existing provision or article of the Constitution.

### 17. Option (a) is correct

Italy, Japan, and South Korea are frequently highlighted in media for their particularly low birth rates, ageing populations, and in some cases, declining populations.

● Italy and Japan are often looked as prime examples of countries with rapidly ageing populations and very low birth rates.

● South Korea has also emerged as a country with significant demographic concerns. Its fertility rate is one of the lowest in the world, and its population is projected to start declining in the coming years.

However, Nigeria, in fact, has a very young and rapidly growing population. South Africa's population growth has slowed in recent years, but it is not yet experiencing a decline.

### 18. Option (c) is correct

Article 109 of the Indian Constitution deals the special procedure for Money Bills. It tells about the process that how money bill are to be handled by the two Houses of Parliament, giving primary authority to the Lok Sabha.

According to Article 110, a Money Bill can only be introduced in the Lok Sabha. The Rajya Sabha (Council of States) does not have the authority to introduce Money Bills.

Rajya Sabha can suggest changes or amendments to a Money Bill, but it cannot reject the bill. The Lok Sabha has the final say, and it can accept or reject the suggestions made by the Rajya Sabha. If the Lok Sabha does not agree with the suggestions within 14 days, the bill is deemed to have been passed in the form it was originally passed by the Lok Sabha.

The Lok Sabha is not bound to accept any amendments suggested by the Rajya Sabha. The Lok Sabha can either accept or reject the suggestions made by the Rajya Sabha. The final authority to approve or reject changes lies with the Lok Sabha.

### 19. Option (d) is correct

Indian Army	Indian Navy	Indian Air Force	Stars
Field Marshal	Admiral of the Fleet	Marshal of the Air Force	5
General	Admiral	Air Chief Marshal	4
Lieutenant General	Vice Admiral	Air Marshal	3
Major General	Rear Admiral	Air Vice Marshal	2
Brigadier	Commodore	Air Commodore	1



## UPSC (CSE PRELIMS) SOLVED PAPERS GENERAL STUDIES PAPER-I

Colonel	Captain	Group Captain	
Lieutenant Colonel	Commander	Wing Commander	
Major	Lieutenant Commander	Squadron Leader	
Captain	Lieutenant	Flight Lieutenant	
Lieutenant	Sub-Lieutenant	Flying Officer	

### 20. Option (a) is correct

The North Eastern Council (NEC) was established by the North Eastern Council Act, 1971, and it serves as a nodal agency for the economic and social development of the North Eastern states of India.

#### Composition of the NEC:

The Governors of each of the constituent states of the North Eastern regions are members of the NEC.

The Chief Ministers of the North Eastern states are members of the NEC.

The President of India nominates three members to the NEC, who generally have expertise relevant to the development needs of the North Eastern region.

### 21. Option (c) is correct

The Constitution (106<sup>th</sup> Amendment) Act, 2023 deals with the Women's Reservation Act, which reserves one-third of all seats for women in Lok Sabha, State legislative assemblies, and the Legislative Assembly of the National Capital Territory of Delhi, including those reserved for SCs and STs.

The 18<sup>th</sup> Lok Sabha was formed after general elections were held in India over seven phases from 19 April to 1 June 2024. However this bill will be implemented only after 2029.

The reservation will be effective after the publication of the census conducted following the Act's commencement and endures for a 15-year period, with potential extension determined by parliamentary action.

The rotation of seats allocated for women will be governed by parliamentary legislation after each delimitation process.

The Bill provided for inserting Article 330A to the constitution, which borrows from the provisions of Article 330, which provides for reservation of seats to SCs/STs in the Lok Sabha.

The Bill provided that reserved seats for women may be allotted by rotation to different constituencies in states or Union Territories.

In the seats reserved for SCs/STs, the Bill sought to provide one-third of the seats to be reserved for women on rotational basis.

### 22. Option (d) is correct

The ninth edition of the Joint Military exercise "Exercise MITRA SHAKTI-2023" concluded in Aundh (Pune). A key focus of the exercise was to enhance interoperability and coordination between the two armies for counter-terrorism operations. It is a joint military exercise between the armies of India and Sri Lanka.

### 23. Option (c) is correct

A Writ of Prohibition is used to command a lower court to stop proceedings in a case. It is a preventive measure that is employed to ensure that a lower court does not exceed its jurisdiction or violate the principles of justice by continuing with proceedings it is not competent to handle.

### 24. Option (b) is correct

According to Article 342 of the Indian Constitution, the President of India specifies the Scheduled Tribes in consultation

with the Governor of the respective state. The final declaration is made by the President, and any changes must be approved by the Parliament. Thus the power to recognize and declare a community as a Scheduled Tribe is not vested in the Governor of a state.

The status of a community as a Scheduled Tribe is state-specific. A community recognized as a Scheduled Tribe in one state may not necessarily be recognized as such in another state. This is because of the socio-economic conditions and criteria that vary from state to state.

### 25. Option (b) is correct

The Union Finance Minister lays the Annual Financial Statement (known as the Union Budget) before both Houses of Parliament on behalf of the President of India, not the Prime Minister. The budget is presented as per Article 112 of the Indian Constitution, which mandates that the President shall cause to be laid before both Houses of Parliament a statement of the estimated receipts and expenditure of the Government of India for that year.

According to Article 113 of the Indian Constitution, no demand for a grant can be made except on the recommendation of the President. This means that any expenditure from the Consolidated Fund of India requires the approval of the President.

### 26. Option (d) is correct

Subrahmanyam Jaishankar is an Indian diplomat and politician serving as the Minister of External Affairs of India since 2019. He has authored two prominent books 'The India Way: Strategies for an Uncertain World' and 'Why Bharat Matters'.

### 27. Option (b) is correct

Argentina is currently experiencing a severe economic crisis, characterised by high inflation, currency devaluation, and significant debt. The country has been in economic turmoil for several years, leading to widespread poverty and social unrest.

Sudan is facing a serious conflict between its regular army, led by General Abdel Fattah al-Burhan, and the Rapid Support Forces (RSF), a powerful paramilitary group led by Mohamed Hamdan Dagalo (Hemetti).

Turkey has not rescinded its membership in NATO. It remains an active member and plays a significant role in the alliance. There have been tensions between Turkey and other NATO members over various issues, including Turkey's military actions and domestic policies, but Turkey continues to be a part of NATO.

### 28. Option (a) is correct

Statement-I is correct. The Sumed Pipeline (Suez-Mediterranean Pipeline) is indeed a significant route for transporting oil and natural gas from the Persian Gulf to Europe. The pipeline stretches from the Gulf of Suez on the Red Sea to the Mediterranean Sea, specifically from Ain Sukhna to Sidi Kerir in Egypt.

Statement-II is also correct. The Sumed Pipeline physically connects the Red Sea (where oil and gas are loaded onto ships from the Persian Gulf) with the Mediterranean Sea, providing a direct route for them to reach European ports.

The connection between the Red Sea and the Mediterranean Sea established by the Sumed Pipeline directly explains its strategic importance for transporting oil and gas to Europe. Thus Statement-II provides the explanation context for Statement-I.

### 29. Option (c) is correct

The Red Sea is located in a desert region with very high temperatures and low humidity. This leads to very little rainfall or any form of precipitation.

Due to its location, there are no major rivers flowing into the

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Red Sea. The water in the Red Sea comes primarily from the inflow of saltier water from the Gulf of Aden through the Babel-Mandeb Strait.

### 30. Option (d) is correct

Power plants, particularly those that burn coal and oil (fossil fuels), emit the majority of sulfur dioxide. This is because sulfur compounds present in these fossil fuels are released into the atmosphere during combustion. Additionally, The emissions from power plants contribute significantly to air pollution, acid rain, and respiratory problems in humans.

### 31. Option (a) is correct

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. In the event of a default, the government would not be able to fulfill its debt obligations, meaning bondholders would not receive the payments they are due.

USA Government debt is not backed by any hard assets, but only by the faith of the Government. US Government debt, such as Treasury Bonds, is backed by the full faith and credit of the US Government rather than any specific physical assets.

Also Statement-II explains Statement-I because the faith and credit of the US Government are the guarantees behind its debt.

### 32. Option (c) is correct

Syndicated lending spreads the risk of borrower default across multiple lenders. Syndicated lending, by definition, involves multiple lenders pooling resources to provide a loan to a single borrower. This inherently distributes the risk of default, as no single lender bears the entire burden if the borrower fails to repay.

A syndicated loan can be structured as a fixed amount (term loan) or as a revolving credit facility (credit line). It is not limited to just a fixed amount/lump sum of funds. This means that syndicated loans can provide flexibility in terms of how the borrower accesses the funds.

Statement- I is correct and Statement-II is incorrect.

### 33. Option (d) is correct

The Digital Rupee or E-Rupee is a tokenised digital version of the Indian Rupee, issued by the Reserve Bank of India (RBI) as a central bank digital currency (CBDC).

CBDC is also called digital fiat currency is issued by the central bank rather than by any commercial bank. It is also a liability of the central bank and denominated in the sovereign currency, as is the case with physical banknotes and coins.

Like physical currency, the digital rupee is also a liability on the RBI's balance sheet. When you hold digital rupees, it's essentially a claim you have on the RBI, similar to holding physical banknotes.

The digital rupee, by itself, doesn't come with inherent inflation protection.

Its value, like physical currency, is subject to inflationary pressures. The RBI manages inflation through its monetary policy measures, not through the inherent design of the digital rupee.

The digital rupee is designed to be freely convertible. This means you can easily exchange it with bank deposits (commercial bank money) and cash without any restrictions.

### 34. Option (b) is correct

- **Nayaputta:** This epithet is used for Mahavira which means 'the son of Naya' and is not associated with Gautama Buddha.

- **Shakyamuni:** The epithet "Shakyamuni" means "Sage of the Shakyas" and highlights the Buddha's royal lineage and his wisdom. It emphasizes his origins and his role as a wise teacher and spiritual leader.

- **Tathagata:** "Tathagata" is compound word used for Buddha and is derived from "Tatha" and "Gata" or "Agata".

- "Tatha" means "thus" or "such."

- "Gata" means "gone" and "Agata" means "come".

- Hence, Tathagata can be interpreted as "Thus-Gone One" or "Thus-Come One."

- So The term "Tathagata" is philosophical and is used by the Buddha to refer to himself, reflecting his realization of the ultimate truth and his transcendence beyond ordinary existence.

### 35. Option (b) is correct

**Let's analyse each statement:**

- Chandrakhetgarh, located in West Bengal, not Odisha, was an ancient port city.

- Inamgaon is a well-known archaeological site in Maharashtra, providing valuable insights into the Chalcolithic period.

- Kerala has numerous megalithic sites, The megalithic monuments at Mangadu consisted of 28 hard compact and unhewn laterite blocks within an area of 5 cents of land.

- Salihundam, is a village and panchayat in Gara Mandal of Srikakulam district in Andhra Pradesh. It is a historically important Buddhist monument of ancient Kalinga, not rock-cut caves.

### 36. Option (a) is correct

Sri Krishnadevaraya in 1510 signed a treaty with the Portuguese. It permitted Albuquerque to construct forts in Bhatkal.

Domingo Paes and Barbosa, Portuguese travellers visited his court in 1520.

Krishnadevaraya maintained friendly relations with the Portuguese.

He also helped the Portuguese to conquer Goa from Bijapur in 1510.

### 37. Option (b) is correct

Ryotwari System establish direct contact with the cultivators (ryots). It did not offer blanket exemption from revenue payment during bad harvests or calamities.

Under the Permanent Settlement there was the provision of strict revenue collection timeline. Zamindars were obligated to pay a fixed amount of revenue to the British by a specific date. Failure to do so could result in the auctioning of their Zamindari to recover the dues.

### 38. Option (b) is correct

Upanishads are known for their philosophical dialogues and teachings, and they often employ allegories and parables to convey complex ideas. Upanishads form the concluding part of the Vedas and are known as 'Vedanta' (the end of the Vedas). They are believed to have been composed between 800-500 BCE. Puranas, on the other hand, are a later genre of Hindu texts, composed from around the 3<sup>rd</sup> century CE onwards.

### 39. Option (a) is correct

India is a member of the International Grains Council. The IGC is an intergovernmental organisation focusing on promoting cooperation and transparency in the global grain market, including grains, rice, oilseeds, and pulses. As of 2023, India's membership in the IGC is confirmed, participating actively in the council's initiatives and discussions on global grain trade (IGC).

Membership in the International Grains Council is not a prerequisite or criteria for a country to engage in the export or import of rice and wheat. IGC provides a platform for dialogue and cooperation among member countries and helps in improving transparency in grain markets, countries are not required to be members to trade in grains. International trade in grains is governed by various other international agreements and national policies, and countries can freely trade in grains, including rice and wheat, regardless of their membership status in the IGC.

**40. Option (c) is correct**

Garba of Gujarat has been inscribed in the Representative List of Intangible Cultural Heritage (ICH) of Humanity by UNESCO, under the provisions of the 2003 Convention for the Safeguarding of Intangible Cultural Heritage during the 18<sup>th</sup> meeting of the Intergovernmental Committee for the Safeguarding of the Intangible Cultural Heritage from 5<sup>th</sup> -9<sup>th</sup> December, 2023 in Kasane, Botswana.

Chhau dance was added on the list in 2010.

Durga puja in Kolkata was added in December 2021.

Kumbh mela was added in 2017.

**41. Option (a) is correct**



The Sahel region of Africa, which stretches across the continent just south of the Sahara Desert, has experienced significant political instability and a series of military coups in recent years. This region, encompassing countries like Mali, Burkina Faso, and Niger, has been plagued by various challenges, including terrorism, ethnic conflicts, and poor governance.

Thus Both Statement-I and Statement-II are correct and Statement-II explains Statement-I.

**42. Option (d) is correct**

India does import apples from the USA. In fact, the USA is one of the major sources of apple imports for India. India has stringent regulations regarding the import of Genetically Modified (GM) food. The Genetic Engineering Appraisal Committee (GEAC) is the competent authority responsible for assessing the safety of GM crops and foods. Importing GM food without GEAC approval is illegal.

Thus Statement-I is incorrect but Statement-II is correct.

**43. Option (a) is correct**

According to Article 96 of the Indian Constitution, the Speaker of the Lok Sabha shall not preside over a session while a resolution for their removal from office is under consideration. Instead, the Deputy Speaker or any other member elected by the House will preside.

The Speaker does have the right to speak in his/her defence during the discussion of a resolution for their removal.

They may participate in the debate and present their case, but they do not preside over the proceedings.

The Speaker retains the right to vote on the resolution like any other member. However, they typically vote only in the event of a tie, using their casting vote.

This rule applies generally, and there is no specific restriction on voting in the first instance for a resolution regarding their removal.

**44. Option (b) is correct**

According to parliamentary procedures, any bill that is pending in the Lok Sabha lapses when the Lok Sabha is dissolved. This means that the bill must be reintroduced in the next session of the Lok Sabha if it is to be considered again.

If a bill has been passed by the Lok Sabha but is still pending in the Rajya Sabha at the time of the dissolution of the Lok

Sabha, the bill lapses. It means the legislative process must start over with the reintroduction of the bill in the next Lok Sabha.

A bill that is under consideration for a joint sitting does not lapse upon the dissolution of the Lok Sabha. If the President has already notified the intention to summon both Houses for a joint sitting, the bill can still be considered at the joint sitting, irrespective of the dissolution of the Lok Sabha.

**45. Option (c) is correct**

Prorogation of a House is generally done after the House is adjourned sine die but there is no bar to the President of India proroguing the House which is in session.

The President of India acts on the advice of the Council of Ministers for proroguing a House. According to Article 74 of the Constitution, the President must act in accordance with the advice of the Council of Ministers.

Prorogation follows the adjournment sine die, which means that the House has been adjourned without setting a date for resumption. However, the President has the constitutional power to prorogue the House even while it is in session, although this is uncommon in practice.

The dissolution of the Lok Sabha is done by the President of India, and it is carried out on the advice of the Council of Ministers. The President's role in this context is largely ceremonial and bound by the advice given by the executive branch, unless there are exceptional circumstances that warrants otherwise.

**46. Option (c) is correct**

The European Parliament indeed approved the Net-Zero Industry Act in March 2023.

The EU's target for achieving carbon neutrality is 2050, not 2040. Additionally, while the EU aims to bolster its own clean technology production, it doesn't necessarily aim to develop all of its own technology by 2050. Collaboration and some level of imports are likely to remain part of the strategy.

Statement-I is correct but Statement-II is incorrect.

**47. Option (d) is correct**

While Venezuela has seen some signs of economic recovery, such as slight growth in GDP and some stabilisation efforts, it is far from experiencing a rapid recovery. Economic conditions remain difficult, with ongoing issues such as high inflation, unemployment, and food shortages. Furthermore, the economic situation has not improved sufficiently to prevent people from fleeing the country. In fact, Venezuela continues to experience a significant outflow of migrants, with more than 7.7 million Venezuelans having left the country due to economic hardship and instability.

Venezuela is known to have the world's largest proven oil reserves. This has been a well-documented fact and remains unchanged. The country's vast oil reserves have been a critical part of its economy and have the potential to significantly influence its economic future. Statement-I is incorrect but Statement-II is correct.

**48. Option (d) is correct**

The earlier National Land Records Modernisation Programme (NILRMP), approved in 2008 as a centrally Sponsored Scheme, has been revamped as the Digital India Land Records Modernisation Programme (DILRMP) a Central Sector Scheme with 100% Central Government funding.

Digitization of cadastral maps is one of the components of the scheme.

In order to address the problem of linguistic barriers in land governance, DoLR 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.

**49. Option (b) is correct**

**Pradhan Mantri Surakshit Matritva Abhiyan**

The Pradhan Mantri Surakshit Matritva Abhiyan has been launched by the Ministry of Health & Family Welfare (MoHFW), Government of India.

The program aims to provide assured, comprehensive and quality antenatal care, free of cost, universally to all pregnant women on the 9<sup>th</sup> of every month.

PMSMA guarantees a minimum package of antenatal care services to women in their 2<sup>nd</sup>/ 3<sup>rd</sup> trimesters of pregnancy at designated government health facilities. However there is no mention of Post pregnancy health care services.

The programme follows a systematic approach for engagement with private sector which includes motivating private practitioners to volunteer for the campaign developing strategies for generating awareness and appealing to the private sector to participate in the Abhiyan at government health facilities.

**50. Option (b) is correct**

**Pradhan Mantri Shram Yogi Maan-dhan (PM-SYM) Yojana:**

The entry age group for enrolment is actually 18 to 40 years.

Beneficiaries contribute a fixed amount monthly based on their age of entry. The government matches the contribution.

Subscribers receive a minimum pension of ₹ 3,000 per month after reaching 60 years.

Family pension is only applicable to the spouse.

**51. Option (d) is correct**

Statement 1 is incorrect. Insolation reaches the earth's surface in short waves and heat is radiated from the earth in long waves, Hence energy leaving the earth's surface i.e. terrestrial radiation heats up the atmosphere more than the incoming solar radiation i.e. insolation.

Statement 2 is correct. Greenhouse gases in the atmosphere (such as water vapour and carbon dioxide) absorb most of the Earth's emitted longwave infrared radiation, which heats the lower atmosphere.

**52. Option (a) is correct**

The troposphere is thicker at the equator than at the poles because the equator receives more direct sunlight, leading to warmer temperatures and greater air expansion. This expanded air results in a greater height of the troposphere. 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.

At the equator, intense solar heating causes air to rise rapidly in strong convectional currents. This rising air carries heat to higher altitudes, contributing to the vertical distribution of heat in the troposphere.

Thus Statement-II explains Statement-I. The strong convectional currents are the primary reason for the greater thickness of the troposphere at the equator, as the rising air due to convection leads to the expansion and increased height of the troposphere in equatorial regions.

**53. Option (d) is correct**

All of the above are products of volcanic eruptions.

**Pyroclastic debris:** This includes any fragmented material that is ejected during a volcanic eruption. It can range in size from large boulders to fine particles and includes ash, pumice, and volcanic bombs. Pyroclastic flows are fast-moving currents of hot gas and volcanic matter.

**Ash and dust:** Volcanic ash is composed of tiny fragments of rock, minerals, and volcanic glass, created during explosive

eruptions. Dust is even finer particulate matter that can travel long distances in the atmosphere. Both are byproducts of volcanic activity

Nitrogen compounds or Nitrogen is a common gas released by volcanoes, and it can react with other elements in the atmosphere to form compounds such as ammonia and nitrogen oxides.

**Sulphur compounds:** Volcanic eruptions release various sulfur compounds, notably sulfur dioxide (SO<sub>2</sub>) and hydrogen sulfide (H<sub>2</sub>S). These gases can contribute to volcanic smog (vog) and have significant environmental and climatic impacts like acid rain etc.

**54. Option (a) is correct**

Isotherms are imaginary lines on a map connecting points with the same temperature.

In January, continents are colder than oceans in the Northern Hemisphere. Isotherms bend northward over oceans, indicating warmer temperatures. Isotherms bend southward over continents, indicating colder temperatures.

The Gulf Stream and North Atlantic Drift are warm ocean currents, not cold.

These currents bring warm water from the tropics towards Europe, making the North Atlantic is relatively warmer in winter.

Isotherms bend northward over the North Atlantic due to these warm currents.

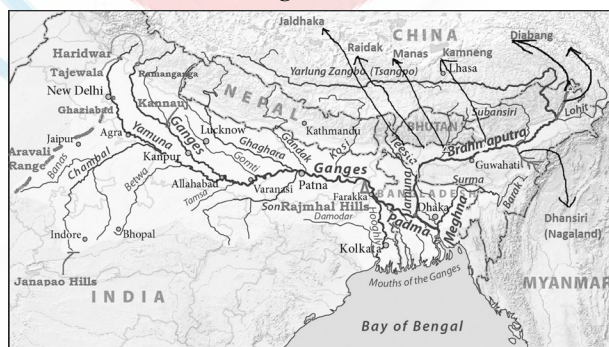
**55. Option (c) is correct**

The Ivory Coast and Ghana are by far the two largest producers of cocoa, accounting for more than 50 percent of the world's cocoa. Côte d'Ivoire is the leading producer, accounting for one-third of the world's cocoa production.

**56. Option (b) is correct**

The correct sequence of Himalayan rivers joining the Ganga downstream of Prayagraj from West to East is:

**Gomati - Ghaghara - Gandak - Kosi.**



**The Ganga River System**

**57. Option (a) is correct**

Rainfall is one of the reasons for weathering of rocks. Rainwater can cause both physical and chemical weathering. Physical weathering occurs due to the impact of raindrops, especially during heavy downpours. Chemical weathering happens when rainwater reacts with minerals in rocks, leading to their breakdown.

Rainwater contains carbon dioxide in solution. Rainwater absorbs carbon dioxide from the atmosphere, forming weak carbonic acid (H<sub>2</sub>CO<sub>3</sub>). This slightly acidic nature of rainwater contributes to chemical weathering.

Rainwater contains atmospheric oxygen. Rainwater dissolves atmospheric gases, including oxygen. The dissolved oxygen in rainwater helps in the oxidation of certain minerals in rocks, which is a form of chemical weathering.

**58. Option (b) is correct**

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

**Finland:** Finland borders the Baltic Sea, not the North Sea.

**Germany:** Germany shares a border with the North Sea.

**Norway:** Norway shares a border with the North Sea. It has a long coastline along the North Sea.

**Russia:** Russia does not border the North Sea.



North sea surrounding Counties

**59. Option (a) is correct**

Dhuandhar waterfall is located on the Narmada River, but the region is not Malwa. It is in Madhya Pradesh Mahakoshal region.

Hundru waterfall is located on the Subarnarekha River within the Chota Nagpur Plateau.

Gersoppa (also known as Jog Falls): This waterfall is on the Sharavati River in the Western Ghats, not the Netravati River.

**60. Option (b) is correct**

The Vosges mountains are located in Europe, not Central Asia. They are fold mountains.

The Alps, located in Europe, are a classic example of fold mountains, formed due to the collision of the African and Eurasian tectonic plates.

The Appalachian Mountains in North America are old fold mountains.

The Andes, running along the western edge of South America, are the longest continental mountain range in the world and are fold mountains formed due to the convergence of the Nazca and South American plates.

**61. Option (c) is correct**

All three organisms are classified as insects.

**Cicada:** Known for their loud buzzing sounds, cicadas are insects.

**Froghopper:** Also known as spittlebugs, they are small, jumping insects.

**Pond Skater:** These insects are known for their ability to walk on the surface of water.

**62. Option (a) is correct**

Chewing gums are a source of environmental pollution because traditional chewing gums often contain polymers like polyisobutylene, polyvinyl acetate, or polyethylene, which do not decompose easily in the environment.

The plastic-like polymers used as gum bases in many chewing gums are the primary reason they are difficult to biodegrade. These polymers contribute significantly to the environmental persistence of chewing gum litter.

Therefore, Both Statement-I and Statement-II are correct and Statement-II explains Statement-I.

**63. Option (d) is correct**

Indris are lemurs found only in Madagascar, and not Brazil. So, this pair is incorrect.

Elks are the largest and most advanced subspecies of red deer. They found in North America, Europe, and Asia, but not in Indonesia. This pair is incorrect.

Bonobos, earlier regarded as a subspecies of the chimpanzee, are found in the Democratic Republic of Congo, not Madagascar. This pair is also incorrect.

Therefore, none of the pairs are correctly matched.

**64. Option (a) is correct**

The World Toilet Organisation is not an agency of the United Nations. It is a global non-profit organisation that focuses on improving sanitation and advocating for better toilet conditions worldwide.

Although the World Toilet Organisation collaborates with the United Nations and has contributed to the establishment of World Toilet Day as a UN observance, it operates independently and is not a UN agency.

The World Toilet Organisation is responsible for some initiatives aimed at improving global sanitation which include:

**World Toilet Summit:** It is an annual event that brings together stakeholders from around the world to discuss and share knowledge on sanitation issues.

**World Toilet Day:** It is established by the World Toilet Organisation and later recognized by the United Nations, this day raises awareness of sanitation challenges and mobilises action to address them.

**World Toilet College:** It is an institution focused on providing training and education on sanitation, toilet maintenance, and hygiene practices.

The World Toilet Organisation mainly focuses on advocacy, education, and the promotion of sanitation and hygiene. It works to raise awareness and mobilise action to improve sanitation but does not primarily function as a funding body.

**65. Option (a) is correct**

Lions do not have a particular breeding season. They can breed throughout the year, but they do show some seasonal preferences depending on their location and environmental factors like rainfall.

Unlike most other big cats, cheetahs do not roar. Cheetahs have a different vocal structure compared to lions, tigers, leopards, and jaguars, preventing them from roaring.

Both male lions and male leopards use scent marking extensively to define their territories. They spray urine and scrape the ground, leaving both olfactory and visual signals for other cats.

**66. Option (a) is correct**

100 Million Farmers is an initiative of World Economic Forum, aims to transition towards sustainable food and water systems. It focuses on achieving net-zero carbon emissions, enhancing nature positivity, and improving farmers' resilience to climate change and market fluctuations.

**67. Option (d) is correct**

All four options are considered Distributed Energy Resources.

Distributed Energy Resources (DERs) are small-scale units of power generation or storage that are situated closer to the end-users.

● **Battery storage:** These store energy and can be deployed within the distribution network or at the consumer end, making them DERs.

● **Biomass generators:** These can be small-scale and located

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near the biomass source, making them suitable for distributed generation.

- **Fuel cells:** Similar to biomass generators, fuel cells can be deployed in a decentralised manner, qualifying as DERs.

- **Rooftop solar photovoltaic units:** These are a classic example of DERs, generating power at the point of consumption.

### 68. Option (a) is correct

Fig exhibits a unique relationship with fig wasps. Fig-Wasp Mutualism i.e Figs and fig wasps share an obligatory mutualistic relationship, meaning they are entirely dependent on each other for survival and reproduction. Fig wasps are the only insects that can pollinate fig trees, and fig trees are the sole source of food and shelter for developing fig wasps.

The fig fruit has its flowers enclosed within. Female fig wasps enter the syconium through a tiny opening called the ostiole. They lay eggs inside and pollinate the flowers in the process.

### 69. Option (c) is correct

All three groups have poisonous species.

Some butterfly species, like the Monarch butterfly, are poisonous. They consume milkweed during their larval stage, which makes them toxic to predators.

Many species of fish are poisonous, such as pufferfish, lionfish, and stonefish. They possess venom as a defence mechanism.

Frogs like Poison dart frogs are a well-known example of poisonous frogs. Their skin secretes toxins that can be deadly.

### 70. Option (a) is correct

Cashew is native to Brazil, cashew was brought to India by Portuguese traders in the 16<sup>th</sup> century.

Papaya also originated in the Americas, specifically in southern Mexico and Central America.

Red Sanders, known for its valuable reddish wood, is endemic to India. It is found in the Eastern Ghats, particularly in Andhra Pradesh.

Therefore, only Red Sanders is native to India.

### 71. 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.

Donyi Polo Airport, Itanagar, Arunachal Pradesh is a newly constructed airport, inaugurated in 2022. It was built on undeveloped land, making it a greenfield project.

Kushinagar International Airport Uttar Pradesh is airport was inaugurated in 2021. It was also built as a new entity on undeveloped land, qualifying as a greenfield project.

Vijayawada International Airport, Andhra Pradesh has existed for several decades. While it has undergone significant expansion and modernization, it wasn't built from scratch on undeveloped land. It is not a greenfield project.

### 72. Option (a) is correct

Water vapour concentration generally decreases with altitude. This is because the air gets colder as we go higher, and colder air has a lower capacity to hold moisture.

The percentage of water vapour in the atmosphere is highest near the equator and decreases as we move towards the poles. This is because the tropics receive the maximum solar radiation, leading to higher temperatures and more evaporation, which in turn increases the amount of water vapour in the air.

### 73. Option (d) is correct

The climate described in the these characteristics is most likely a Marine West Coast Climate (Cfb) according to the Köppen climate classification system.

Marine west coast climates are known for their mild temperatures year-round. The influence of the nearby ocean moderates both summer highs and winter lows, resulting in a smaller range of temperatures compared to continental climates at similar latitudes.

These regions experience frequent precipitation because of prevailing westerly winds carrying moist air from the ocean. The cyclones associated with these winds bring rain or snowfall throughout the year.

The amount of precipitation in marine west coast climates can vary depending on factors like latitude, topography, and proximity to the ocean. The range of 50 cm to 250 cm falls within the typical range observed in these regions.

### 74. Option (c) is correct

The Coriolis force is an inertial force that acts on objects in motion within a rotating frame of reference. On Earth, this force causes moving objects (like air masses or ocean currents) to deflect to the right in the Northern Hemisphere and to the left in the Southern Hemisphere.

The magnitude of the Coriolis force is directly proportional to the speed of the moving object. Faster winds experience a stronger Coriolis deflection.

The Coriolis force is strongest at the poles because the Earth's rotation is fastest at these points. At the equator, the Earth's surface moves parallel to the axis of rotation, resulting in zero Coriolis effect.

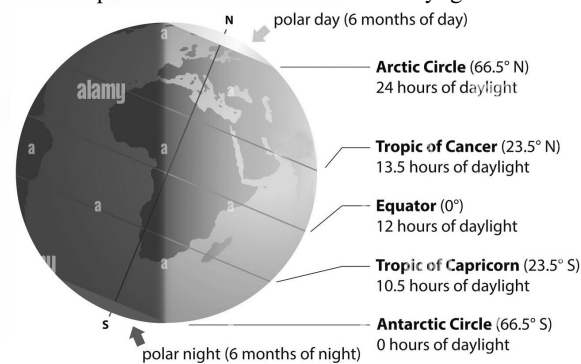
### 75. Option (d) is correct

On June 21<sup>st</sup>, the Summer Solstice, the Earth's tilt positions the North Pole at its maximum inclination towards the Sun. The equator receives 12 hours of daylight throughout the year, regardless of the season. On June 21<sup>st</sup>, the Sun is directly overhead at the Tropic of Cancer.

Locations at and north of this latitude experience their longest day of the year, with more than 12 hours of daylight.

However, the Tropic of Capricorn is in the Southern Hemisphere, experiencing its shortest day of the year on June 21<sup>st</sup> with less than 12 hours of daylight.

Also the Arctic Circle on June 21<sup>st</sup>, experiences 24 hours of daylight. Therefore, both the Tropic of Cancer and the Arctic Circle experience more than 12 hours of daylight on June 21<sup>st</sup>.



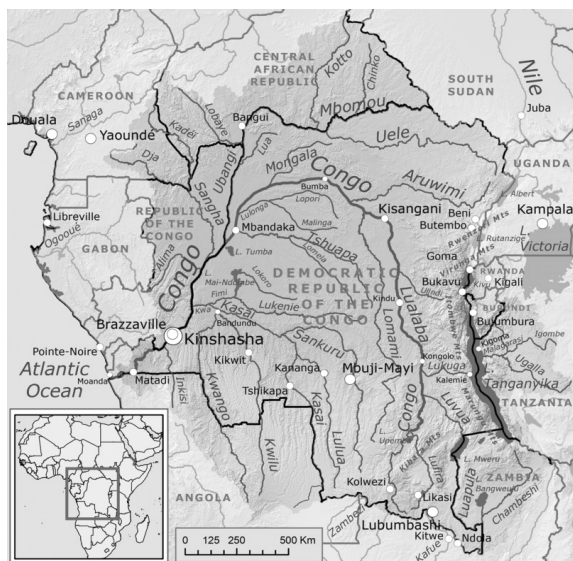
Summer Solstice (June 21)

### 76. Option (b) is correct

The Congo Basin in Central Africa is home to the world's largest tropical peatland complex. This vast peatland stores an immense amount of carbon, estimated to be equivalent to about three years of global fossil fuel emissions.

Peatlands are a critical carbon sink. They store more carbon than all the world's forests combined. When peatlands are drained or degraded, this stored carbon is released into the atmosphere, contributing to climate change.





Congo Basin

Amazon Basin is known for its vast rainforests, it is not the primary location of the world's largest tropical peatland.

Kikori Basin is located in Papua New Guinea and contains significant peatlands, but not the largest tropical peatland complex.

Rio de la Plata Basin in South America is primarily known for its grasslands and is not related with major peatland areas.

**77. Option (d) is correct**

PFAS are found to be zero in drinking water, food and food packaging materials. PFAS are used in a wide range of consumer products, and due to their persistence, they can leach into the environment and contaminate water sources, food, and packaging materials.

PFAS are not easily degraded in the environment. PFAS are known as 'forever chemicals' because the strong carbon-fluorine bond makes them highly resistant to natural degradation processes. Also this persistence leads to their accumulation in the environment.

Persistent exposure to PFAS can lead to bioaccumulation in animal bodies. As PFAS don't break down easily, they can build up in the tissues of animals and humans over time, leading to potential health concerns.

**78. Option (b) is correct**

Parasitoid species are found in Carabid beetles, Flies, and Wasps.

Carabid beetles are predatory, and some species are known to be parasitoids, particularly of other insects.

Centipedes are predatory arthropods and not parasitoids. They hunt and kill their prey.

Diptera (flies) includes a large number of parasitoid species. For example, Tachinid flies are parasitoids of various insects.

Termites are not parasitoids. They are social insects that primarily feed on wood and other plant matter.

Hymenoptera (wasps, bees, ants) has numerous parasitoid species. Many wasp species are parasitoids, laying their eggs on or in other insects.

**79. Option (c) is correct**

The pea family is botanically known as Fabaceae or Leguminosae. Groundnut (Peanut), Horsegram and Soybean all three plants are legumes, characterized by their pod-like fruit and ability to fix nitrogen from the atmosphere through a symbiotic relationship with bacteria in their root nodules.

**80. Option (c) is correct**

The Indian Flying Fox (*Pteropus giganteus*) is not classified as vermin under the Wild Life (Protection) Act, 1972.

The Indian Flying Fox primarily feed on the flowers, fruits and sometimes leaves and vines also. Thus Statement-I is incorrect, but Statement-II is correct.

**81. Option (d) is correct**

The number of children born per 1000 people in the population in a year is equal to birth rate, not the total fertility rate.

The average number of live births a woman would have by the end of her child-bearing age. This is called Total Fertility Rate (TFR). In simple terms, TFR tells us the average number of children a woman would have if current birth trends continued.

**82. Option (d) is correct**

Non-Banking Financial Companies (NBFCs) in India do not have direct access to the Liquidity Adjustment Facility (LAF) window of the Reserve Bank of India (RBI). The LAF is a tool used by RBI to manage short-term liquidity in the banking system.

Foreign Institutional Investors (FIIs) are permitted to invest in Government Securities (G-Secs) in India, subject to certain regulations and limits set by the Securities and Exchange Board of India (SEBI) and RBI.

Stock exchanges in India can offer separate trading platforms for debt securities. For instance, the National Stock Exchange (NSE) and the Bombay Stock Exchange (BSE) have dedicated platforms for trading in corporate bonds and government securities.

**83. Option (d) is correct**

Insurance companies have large funds that they need to invest securely for long-term returns. Corporate bonds and government securities fit this investment profile. Similar to insurance companies, pension funds manage retirement savings and need safe, long-term investment avenues like corporate bonds and government securities. Retail investors can also invest in corporate bonds and government securities, though the process might be slightly more complex than investing in stocks.

**84. Option (d) is correct**

Financial instruments represent claims to assets or cash flows.

Currency swap is a derivative contract where two parties exchange principal and interest payments in different currencies. It is a type of financial instrument.

Exchange-Traded Funds (ETFs) are baskets of securities (like stocks) that are traded on stock exchanges, similar to individual stocks. They represent a financial instrument.

Motor vehicles are tangible assets, not financial instruments.

**85. Option (b) is correct**

Storage of agricultural produce (Storage) is a tertiary activity. It falls under the service sector, facilitating the smooth flow of goods from producers to consumers.

Dairy farming involves the direct extraction of raw materials (milk) from natural resources (animals). Hence, it's a primary activity.

Mineral exploration is a primary activity as it involves exploring and extracting raw materials from the earth.

Weaving cloth transforms raw materials (cotton, silk, etc.) into a finished product (cloth). This is a secondary activity.

**86. Option (c) is correct**

Agricultural residues include materials like crop stalks, husks, and leaves. They are a viable source of biomass that can be converted into biofuels, including Sustainable Aviation Fuel (SAF).

Corn grain is a source of sugars that can be fermented to produce ethanol, a biofuel. While ethanol is primarily used in gasoline blends, it can also be further processed into SAF.

Wastewater treatment sludge is rich in organic matter. Through processes like anaerobic digestion, it can produce biogas, which can be further converted into SAF.

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Wood mill waste includes sawdust, wood chips, and bark. These lignocellulosic materials can be converted into biofuels through various thermochemical or biochemical processes, ultimately leading to SAF production.

### 87. Option (b) is correct

A farmer's plough is a long-term asset used repeatedly over time, making it fixed capital.

A computer is a long-term asset used over a period of time, making it fixed capital.

Yarn is consumed in the production process and needs to be replaced regularly, making it working capital.

Petrol is an example of working capital is consumed in the production process and needs to be replenished regularly, making it working capital.

### 88. Option (c) is correct

The "metaverse" can include virtual reality which is characterised by persistent virtual worlds which continue to exist even when you're not playing—as well as augmented reality that combines aspects of the digital and physical worlds. However, it doesn't require that those spaces be exclusively accessed via VR or AR. Virtual worlds—such as aspects of Fortnite that can be accessed through PCs, game consoles, and even phones—have started referring to themselves as "the metaverse".

### 89. Option (b) is correct

The Reserve Bank of India requires foreign banks operating as wholly owned subsidiaries to maintain a minimum capital requirement. As of current regulations, the RBI mandates that these subsidiaries must have a minimum paid-up voting equity capital of ₹5 billion (₹500 crore).

The RBI has set guidelines that require at least 50% of the board members of wholly owned banking subsidiaries in India to be Indian nationals, this ensures that there is adequate local representation in the governance of these banks.

### 90. Option (a) is correct

CSR rules specify that expenditures that benefit the company directly or its employees will not be considered as CSR activities because CSR activities should be aimed at community development and not at benefiting the company or its employees directly.

As per the Companies Act, 2013, companies meeting certain criteria (like net worth, turnover, or net profit thresholds) are required to spend at least 2% of their average net profits of the last three financial years on CSR activities.

### 91. Option (b) is correct

Radioisotope Thermoelectric Generators (RTGs) are lightweight, compact spacecraft power systems that are extraordinarily reliable. RTGs provide electrical power using heat from the natural radioactive decay of plutonium-238, in the form of plutonium oxide. The large difference in temperature between this hot fuel and the cold environment of space is applied across special solid-state metallic junctions called thermocouples, which generates an electrical current using no moving parts.

### 92. Option (d) is correct

Massive stars use up the hydrogen fuel in their core faster, despite starting out with much more of it, meaning they live much shorter lives than dwarf stars. Giant stars have a greater rate of the nuclear reactions that light up stars.

### 93. Option (a) is correct

Nitric oxide (NO) is synthesised in the human body and it acts as potent vasodilator. It is produced by endothelial cells lining the blood vessels and plays a crucial role in regulating vascular tone and blood flow by relaxing the smooth muscle

cells in the vessel walls, leading to vasodilation and increased blood flow.

Nitrous oxide (N<sub>2</sub>O), which is commonly known as laughing gas, is an anaesthetic used in medical settings. It does not have any important role in blood flow regulation in the human body.

Nitrogen dioxide (NO<sub>2</sub>) is a toxic gas that can cause respiratory issues. It is not involved in the process of vasodilation or blood flow regulation.

Nitrogen pentoxide (N<sub>2</sub>O<sub>5</sub>) is a chemical compound used in industrial processes and is not synthesised in the human body. It does not play any role in vasodilation or blood flow regulation.

### 94. Option (b) is correct

Radar technology is mainly known for generating weather data and for the surveillance of aircraft. Radar technology plays a crucial role in studying animal migration. The Next Generation Weather Radar program (NEXRAD) is a widely-used system that provides high sensitivity for detecting migrating animals.

### 95. Option (d) is correct

Rafale is a 4.5-generation fighter, stands in stark contrast.

The MiG-29 Fulcrum is a modern 4th generation supersonic fighter that can achieve more than double the speed of sound.

The LCA Tejas Mk 1A is a single-engine, 4.5 generation, single seat, multirole fighter aircraft that is currently being manufactured in the country by Hindustan Aeronautics Limited (HAL), the Indian aerospace major in the public sector.

### 96. Option (b) is correct

Hydrogels are used in the following applications:

Hydrogels are commonly used in biomedical applications, including controlled drug delivery systems, due to their ability to absorb and release drugs in a controlled manner.

Hydrogels can be used in evaporative cooling systems, including mobile air-conditioning systems, where they help in the absorption and release of water to enhance cooling.

Hydrogels are not typically used in the preparation of industrial lubricants. Lubricants generally require materials with specific viscosity and stability properties that hydrogels do not provide.

### 97. Option (d) is correct

Fuel cell electric vehicles emit only water vapour and warm air, producing no harmful tailpipe emissions. Similar to electricity, hydrogen is an energy carrier that can be produced from various feedstocks. These feedstocks and production methods should be considered when evaluating hydrogen emissions.

### 98. Option (c) is correct

Pumped-storage hydropower is a type of hydroelectric power generation used for storing energy. When there is low electricity demand, excess energy is used to pump water from a lower elevation reservoir to a higher elevation reservoir. During periods of high electricity demand, the stored water is released back down to the lower reservoir through turbines to generate electricity.

### 99. Option (d) is correct

Membrane bioreactors are combinations of membrane processes like microfiltration or ultrafiltration with a biological wastewater treatment process, the activated sludge process.

These technologies are now widely used for municipal and industrial wastewater treatment.

### 100. Option (c) is correct

Collateral Borrowing and Lending Obligations (CBLO) are instruments of Money market. CBLO is a money market instrument that facilitates borrowing and lending operations on a collateralized basis. It is used by banks, financial institutions, and other entities to manage their short-term liquidity requirements.