UPSC CIVIL SERVICES (PRELIMINARY) EXAMINATION 2023

Question 1 | Ancient History / Buddhism

In which one of the following regions was Dhanyakataka, which flourished as a prominent Buddhist centre under the Mahasanghikas, located?

(a) Andhra
(b) Gandhara
(c) Kalinga
(d) Magadha

ANSWER: (UPSC Set B): (a) Andhra

DETAILED EXPLANATION

- **Option (a)** – Dhanyakataka (Dharanikota, near Amaravati, Guntur district, Andhra Pradesh) was a major Buddhist centre of the Mahasanghika sub-schools (Purvashaila and Aparashaila). The great Amaravati Stupa lies here; the region was ruled by the Satavahanas and later the Ikshvakus (Nagarjunakonda).
- **Option (b)** – Gandhara (north-west) is known for the Greco-Buddhist school of art, Taxila and Sarvastivada/Mahayana activity.
- **Option (c)** – Kalinga is associated with Ashoka's war and with Jain and Buddhist remains such as Dhauli, Lalitgiri and Ratnagiri.
- **Option (d)** – Magadha is the heartland of early Buddhism (Rajagriha, Pataliputra, Bodh Gaya) but not the Mahasanghika centre named here.

➤ **Memory hook**: Mahasanghika → Andhra (Amaravati, Nagarjunakonda); Sarvastivada → Mathura/Kashmir/Gandhara; Sthaviravada → Magadha and later Sri Lanka.

STATIC + CURRENT AFFAIRS LINK

- **Static**: Buddhist councils and schools (Theravada, Mahasanghika, Sarvastivada); Satavahana-era art – Amaravati school. Current affairs: Global Buddhist Summit (New Delhi, April 2023, Ministry of Culture and International Buddhist Confederation); Buddhist Circuit development.

SOURCES

1. NCERT Class 11 – An Introduction to Indian Art / Themes in World History (Buddhism chapters)
2. Nitin Singhania – Indian Art and Culture (Buddhist schools)
3. Ministry of Culture / ASI – asi.nic.in (Amaravati, Nagarjunakonda)

Question 2 | Ancient History / Art

With reference to ancient India, consider the following statements:

1. The concept of Stupa is Buddhist in origin.
2. Stupa was generally a repository of relics.
3. Stupa was a votive and commemorative structure in Buddhist tradition.

How many of the statements given above are correct?

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

ANSWER: (UPSC Set B): (b) Only two

DETAILED EXPLANATION

- **Statement 1** – Incorrect. Burial mounds (the earliest stupa-like forms) are pre-Buddhist; the Vedic and megalithic traditions raised funerary mounds, and Jain stupas also existed (Mathura). Buddhism adopted and popularised the form but did not originate the concept.

- **Statement 2** – Correct. Buddhist stupas generally enshrined bodily relics (dhatu) of the Buddha or revered monks; Sanchi, Bharhut and Sarnath are examples.
- **Statement 3** – Correct. Stupas were also votive (offered as acts of merit) and commemorative structures marking an important event or place in the Buddha's life or teaching.

➤ **Hence only two statements are correct** – option (b). UPSC's trap here is the word 'origin'.

STATIC + CURRENT AFFAIRS LINK

- **Static**: Stupa architecture – harmika, chhatra, torana, pradakshina patha; Mauryan to Gupta stupas. Current affairs: Sanchi and Buddhist monuments in tourism/heritage push; Vadnagar and Sarnath developments under the Buddhist Circuit.

SOURCES

1. NCERT Class 11 – An Introduction to Indian Art, Ch. 6 (Buddhist and Jain art)
2. Nitin Singhania – Indian Art and Culture (Stupa)
3. Archaeological Survey of India – asi.nic.in

Question 3 | Ancient History / Sangam Age

With reference to ancient South India, Korkai, Poompuhar and Muchiri were well known as

(a) capital cities
(b) ports
(c) centres of iron-and-steel making
(d) shrines of Jain Tirthankaras

ANSWER: (UPSC Set B): (b) ports

DETAILED EXPLANATION

- **Option (b)** – All three were famous Sangam-age ports: Korkai (Pandya, pearl fishery and conch trade), Poompuhar/Kaveripattinam (Chola, at the Kaveri mouth) and Muchiri/Muziris (Chera, on the Malabar coast, Roman trade).
- **Option (a)** – The capitals were Madurai (Pandya), Uraiyur (Chola) and Vanji (Chera).
- **Options (c) and (d)** – These were not iron-steel centres or Tirthankara shrines; Sangam texts describe them as maritime trade hubs.

➤ Roman gold coins, amphorae and Pattanam excavations support Muziris' role in Indo-Roman trade.

STATIC + CURRENT AFFAIRS LINK

- **Static**: Sangam polity and Indo-Roman trade (Periplus of the Erythraean Sea, Pliny). Current affairs: Muziris Heritage Project (Kerala); Project Mausam (Ministry of Culture) reviving Indian Ocean maritime linkages; Keeladi excavations in Tamil Nadu.

SOURCES

1. NCERT Class 12 – Themes in Indian History I (trade)
2. R.S. Sharma – India's Ancient Past (Sangam Age)
3. Ministry of Culture – Project Mausam; keralatourism.org (Muziris)

Question 4 | Ancient History / Sangam Literature

Which one of the following explains the practice of 'Vattakirutal' as mentioned in Sangam poems?

(a) Kings employing women bodyguards.
(b) Learned persons assembling in royal courts to discuss religious and philosophical matters
(c) Young girls keeping watch over agricultural fields and driving away birds and animals
(d) A king defeated in a battle committing ritual suicide by starving himself to death

ANSWER: (UPSC Set B): (d) A king defeated in a battle committing ritual suicide by starving himself to death

DETAILED EXPLANATION

- **Option (d)** – 'Vatakkiruttal' (Vattakirutal) was the Sangam practice in which a king, defeated or wronged, sat facing north and fasted unto death. It reflects the heroic code of honour in Sangam poems such as the Purananuru.
- **Option (a)** – Women bodyguards (Yavani/Greek women) are noted in later Tamil and Mauryan-Kautilyan references, not 'Vattakirutal'.
- **Option (b)** – Royal court assemblies of poets and scholars are the Sangams themselves.

- **Option (c)** – Girls guarding millet fields are described in Sangam akam poetry (the Kurinji tinai), a different theme.

STATIC + CURRENT AFFAIRS LINK

- Static: Sangam literature – Ettuthogai, Pattuppattu, tinai concept; heroic values. Current affairs: Tamil classical language status and Tamil literature initiatives; ASI work at Keeladi and Adichanallur.

SOURCES

1. R.S. Sharma – India's Ancient Past (Sangam Age)
2. Nitin Singhania – Indian Art and Culture / Spectrum Ancient India
3. NCERT Class 6 – Our Pasts I (Kingdoms, Kings and an Early Republic)

Question 5 | Medieval History / Dynasties

Consider the following dynasties:

1. Hoysala
2. Gahadavala
3. Kakatiya
4. Yadava

How many of the above dynasties established their kingdoms in early eighth century AD?

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

ANSWER: (UPSC Set B): (d) None

DETAILED EXPLANATION

- **Hoysala** – rose in the 10th–11th century as Chalukya feudatories (Nripa Kama II, c. 1006) and became independent in the 12th century (Vishnuvardhana).
- **Gahadavala** – founded by Chandradeva around 1090 CE in Kanauj; centred on Varanasi.
- **Kakatiya** – feudatories of Rashtrakutas/Western Chalukyas; became independent in the 12th century (Prola II, Rudradeva) with capital Warangal.
- **Yadava (Seuna)** – 9th-century origins, rose to power from the late 12th century (Bhillama V) with Devagiri as capital.

➤ None of the four arose in the early 8th century; the early 8th century saw the Pallavas, Chalukyas of Badami, early Rashtrakutas (Dantidurga c. 735–36) and Gurjara-Pratiharas.

STATIC + CURRENT AFFAIRS LINK

Static: Early medieval dynasties – rise of the Tripartite Struggle, Chola, Hoysala, Kakatiya, Yadava. Current affairs: UNESCO World Heritage inscriptions of Hoysala temples (Belur, Halebidu, Somanathapura – September 2023) and Ramappa (Kakatiya, 2021).

SOURCES

1. Satish Chandra – Medieval India (Part 1)
2. NCERT Class 7 – Our Pasts II (New Kings and Kingdoms)
3. UNESCO – whc.unesco.org (Ramappa; Sacred Ensembles of the Hoysalas)

Question 6 | Ancient & Medieval History / Literature

With reference to ancient Indian History, consider the following pairs:

Literary work	Author
1. Devichandragupta	Bilhana
2. Hammira-Mahakavya	Nayachandra Suri
3. Milinda-panha	Nagarjuna
4. Nitivakyamrita	Somadeva Suri

How many of the above pairs are correctly matched?

(a) Only one

(b) Only two
(c) Only three
(d) All four

ANSWER: (UPSC Set B): (b) Only two
DETAILED EXPLANATION

- **Pair 1** – Devichandraguptam is a play by Vishakhadatta (also author of Mudrarakshasa). Bilhana wrote Vikramankadevacharita.
- **Pair 2** – Hammira Mahakavya, on the Chauhan king Hammira of Ranthambore, is by the Jain scholar Nayachandra Suri.
- **Pair 3** – Milinda-panha ('Questions of Milinda') records the dialogue between King Menander and the monk Nagasena, not Nagarjuna.
- **Pair 4** – Nitivakyamrita, a treatise on polity, was written by the Jain monk Somadeva Suri (Rashtrakuta era).

➤ **Only pairs 2 and 4 are correct** – option (b).

STATIC + CURRENT AFFAIRS LINK
Static: Sanskrit and Pali literature; Indo-Greek contacts (Menander); Rajput chronicles. Current affairs: National Mission for Manuscripts and digitisation of ancient texts.

SOURCES
1. Spectrum – A Brief History of Modern India / Ancient India (literary sources)
2. Upinder Singh – A History of Ancient and Early Medieval India
3. National Mission for Manuscripts – namami.gov.in

Question 7 | Ancient History / Religion

"Souls are not only the property of animal and plant life, but also of rocks, running water and many other natural objects not looked on as living by other religious sects." The above statement reflects one of the core beliefs of which one of the following religious sects of ancient India?
(a) Buddhism
(b) Jainism
(c) Shaivism
(d) Vaishnavism

ANSWER: (UPSC Set B): (b) Jainism
DETAILED EXPLANATION

- **Option (b)** – Jainism holds that jiva (soul) exists in everything, including earth, water, fire, air, plants and animals, which is the basis of its extreme ahimsa.
- **Option (a)** – Buddhism denies a permanent soul (anatta) and does not attribute souls to rocks or water.
- **Options (c), (d)** – Shaivism and Vaishnavism are devotional theistic traditions with no such doctrine.

STATIC + CURRENT AFFAIRS LINK

- Static: Mahavira's teachings – Triratna, Panchamahavrata, anekantavada. Current affairs: Jain heritage – Palitana/Shikharji issue (Jharkhand, early 2023) and the movement against tourism at pilgrimage hills.

SOURCES
1. NCERT Class 11 – Themes in World History / Class 6 History (Jainism)
2. Nitin Singhania – Indian Art and Culture (Jainism)
3. Spectrum – Ancient India

Question 8 | Medieval History / Vijayanagara

Who among the following rulers of Vijayanagara Empire constructed a large dam across Tungabhadra River and canal-cum-aqueduct several kilometres long from the river to the capital city?
(a) Devaraya I
(b) Mallikarjuna
(c) Vira Vijaya
(d) Virupaksha

ANSWER: (UPSC Set B): (a) Devaraya I
DETAILED EXPLANATION

- **Option (a)** – Devaraya I (1406–22) built a dam across the Tungabhadra and an aqueduct of roughly 24 km to bring water to Vijayanagara, improving water supply and irrigation.
- **Options (b), (c), (d)** – Mallikarjuna, Vira Vijaya and Virupaksha belonged to the weak, later Sangama phase and are not credited with this work.

➤ Do not confuse with Krishnadevaraya (Tuluva), who built the Hazara Rama temple and tanks such as the one at Nagalapura.

STATIC + CURRENT AFFAIRS LINK

- Static: Vijayanagara – Nayakas, Amara system, irrigation works; Hampi. Current affairs: Hampi conservation and Tungabhadra dam (Hospet) gate issues (2024); Karnataka heritage tourism.

SOURCES

1. Satish Chandra – Medieval India (Vijayanagara)
2. NCERT Class 12 – Themes in Indian History II, Ch. 7 (An Imperial Capital: Vijayanagara)
3. ASI – Hampi, World Heritage Site

Question 9 | Medieval History / Gujarat Sultanate

Who among the following rulers of medieval Gujarat surrendered Diu to Portuguese?
(a) Ahmad Shah
(b) Mahmud Begarha
(c) Bahadur Shah
(d) Muhammad Shah

ANSWER: (UPSC Set B): (c) Bahadur Shah
DETAILED EXPLANATION

- **Option (c)** – Bahadur Shah, pressed by Humayun's campaign, agreed (1534–35) to Portuguese help and gave them Bassein and permission to build a fort at Diu. He was killed in 1537 during a quarrel with the Portuguese.
- **Options (a), (b)** – Ahmad Shah founded Ahmedabad (1411) and Mahmud Begarha (1458–1511) fought the Portuguese at Chaul/Diu in 1508–09 with Mamluk-Egyptian support; neither surrendered Diu.
- **Option (d)** – Muhammad Shah was a later weak Gujarat ruler.

STATIC + CURRENT AFFAIRS LINK

- Static: Portuguese in India – Cartaz system, Bassein Treaty. Current affairs: Diu and Daman integration as part of the Union Territory of Dadra & Nagar Haveli and Daman & Diu (2020); Diu Fort heritage.

SOURCES

1. Satish Chandra – Medieval India (Gujarat Sultanate)
2. NCERT Class 12 – Themes in Indian History II
3. Bipan Chandra – History of Modern India (Portuguese)

Question 10 | Modern History / Constitutional Development

By which one of the following Acts was the Governor General of Bengal designated as the Governor General of India?
(a) The Regulating Act
(b) The Pitt's India Act
(c) The Charter Act of 1793
(d) The Charter Act of 1833

ANSWER: (UPSC Set B): (d) The Charter Act of 1833
DETAILED EXPLANATION

- **Option (d)** – The Charter Act of 1833 made the Governor-General of Bengal the Governor-General of India (Lord William Bentinck, the first), centralised legislative power in him and ended the Company's trade.
- **Option (a)** – Regulating Act 1773: created the post of Governor-General of Bengal (Warren Hastings) and the Supreme Court at Calcutta.
- **Option (b)** – Pitt's India Act 1784: Board of Control – dual control.

- **Option (c)** – Charter Act 1793: renewed Company rule for 20 years; salaries of Board of Control paid from Indian revenue.

STATIC + CURRENT AFFAIRS LINK

- Static: Constitutional landmarks 1773–1947 (Laxmikanth – Historical Background). Current affairs: Reappraisal of colonial-era laws (replacement of IPC, CrPC, Evidence Act by BNS, BNSS, BSA – Bills introduced August 2023).

SOURCES

1. M. Laxmikanth – Indian Polity, Ch. 1 (Historical Background)
2. Bipan Chandra – History of Modern India
3. NCERT Class 12 – Themes in Indian History III

Question 11 | Polity / Fundamental Rights

In essence, what does 'Due Process of Law' mean?

(a) The principle of natural justice
(b) The procedure established by law
(c) Fair application of law
(d) Equality before law

ANSWER: (UPSC Set B): (a) The principle of natural justice

DETAILED EXPLANATION

- **Option (a)** – Due process, an American doctrine (5th and 14th Amendments), requires that law and procedure be fair, reasonable and observe natural justice (audi alteram partem; nemo judex in causa sua). This is the official key's answer.
- **Option (b)** – 'Procedure established by law' is the phrase actually used in Article 21 (borrowed from Japan). Originally it meant only that a valid law must have been enacted (A.K. Gopalan, 1950).
- **Option (c)** – 'Fair application of law' is close in spirit but describes how a law is applied, not the doctrine itself.
- **Option (d)** – Equality before law is Article 14 (a British, Dicean concept).

➤ Maneka Gandhi (1978) read 'procedure established by law' as 'fair, just and reasonable', bringing due-process content into Article 21. The question drew criticism for ambiguity, but the official key accepts (a).

STATIC + CURRENT AFFAIRS LINK

- Static: Article 21; evolution from Gopalan to Maneka Gandhi; Right to Privacy (Puttaswamy, 2017). Current affairs: Delhi High Court petition on 'vague' Prelims questions (June–July 2023) discussed this very term; debate on new criminal laws and procedural fairness.

SOURCES

1. M. Laxmikanth – Indian Polity (Fundamental Rights, Article 21)
2. D.D. Basu – Introduction to the Constitution of India
3. Maneka Gandhi v. Union of India (1978) – Supreme Court judgments

Question 12 | Polity / Prison Administration

Consider the following statements:

Statement-I: In India, prisons are managed by State Governments with their own rules and regulations for the day-to-day administration of prisons.

Statement-II: In India, prisons are governed by the Prisons Act, 1894 which expressly kept the subject of prisons in the control of Provincial Governments.

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 is the correct explanation for Statement-I
(b) Both Statement-I and Statement-II are correct and Statement-II is not the correct explanation for Statement-I
(c) Statement-I is correct but Statement-II is incorrect
(d) Statement-I is incorrect but Statement-II is correct

ANSWER: (UPSC Set B): (a) Both Statement-I and Statement-II are correct and Statement-II is the correct explanation for Statement-I

DETAILED EXPLANATION

- **Statement-I** – Correct. 'Prisons' is Entry 4 of the State List (Seventh Schedule). States run prisons under their own Prison Manuals and rules, within the central framework of laws such as the Prisons Act, 1894 and the Model Prison Manual 2016 of the MHA.
- **Statement-II** – Treated as correct by the official key. The Prisons Act, 1894 (a colonial central law that still applies) provides for the management of prisons and empowers the Provincial (now State) Governments to make rules, thereby leaving prison administration with them.
- **Link between the two** – Statement-II explains Statement-I: the colonial law placed prison administration in provincial hands and the Constitution continued this by placing prisons in the State List.

➤ **Answer (a). Note**: the Prisons Act, 1894 is a central enactment, so its 'expressly kept the subject in Provincial control' wording is loose; the key still marks it correct. This was one of the more debated items.

STATIC + CURRENT AFFAIRS LINK

- Static: Seventh Schedule – State List Entry 4; Model Prison Manual 2016; Model Prisons and Correctional Services Act 2023. Current affairs: NCRB 'Prison Statistics India' (overcrowding and undertrials); Supreme Court directions on prison reforms; MHA Model Prisons Act, 2023 (May 2023).

SOURCES

1. M. Laxmikanth – Indian Polity (Union-State relations; Seventh Schedule)
2. Ministry of Home Affairs – mha.gov.in (Model Prison Manual 2016)
3. NCRB – ncrb.gov.in (Prison Statistics India)

Question 13 | Polity / Constitutionalism

Which one of the following statements best reflects the Chief purpose of the 'Constitution' of a country?

(a) It determines the objective for the making of necessary laws.
(b) It enables the creation of political offices and a government.
(c) **It defines and limits the powers of government.**
(d) It secures social justice, social equality and social security.

ANSWER: (UPSC Set B): (c) It defines and limits the powers of government.

DETAILED EXPLANATION

- **Option (c)** – The core purpose of a constitution is constitutionalism: it defines the powers of the organs of government and limits them to prevent arbitrary rule (rule of law, separation of powers, fundamental rights).
- **Option (a)** – Objectives (Preamble, DPSPs) guide lawmaking but are not the chief purpose.
- **Option (b)** – Creating offices and government is one function, not the best summary.
- **Option (d)** – Social justice is a goal pursued through the Constitution, not its chief purpose.

STATIC + CURRENT AFFAIRS LINK

- Static: Constitutionalism; basic structure doctrine (Kesavananda Bharati, 1973); limited government. Current affairs: Constitution Day (26 November) and 75 years of the Constitution; Supreme Court's constitution-bench judgments (e.g., Article 370 case, 2023).

SOURCES

1. M. Laxmikanth – Indian Polity, Ch. 1–2
2. NCERT Class 11 – Indian Constitution at Work, Ch. 1 (Constitution: Why and How?)
3. Supreme Court of India – main.sci.gov.in

Question 14 | Polity / Constitutional Amendments

In India, which one of the following Constitutional Amendments was widely believed to be enacted to overcome the judicial interpretations of the Fundamental Rights?

(a) 1st Amendment
(b) 42nd Amendment
(c) 44th Amendment
(d) 86th Amendment

OFFICIAL KEY (UPSC Set B): QUESTION DROPPED BY UPSC – no marks counted
DETAILED EXPLANATION

➤ **Official key**: marked 'X' – the question was DROPPED by UPSC for Set B and no marks were counted.

Why it was ambiguous – The 1st Amendment (1951) overrode Romesh Thappar and Champakam Dorairajan; the 42nd Amendment (1976) sought to curb judicial review and diluted FR primacy over DPSPs (partly struck down in Minerva Mills); the 44th (1978) restored rights. Several options could be argued as responses to judicial interpretation.

86th Amendment (2002) – Inserted Article 21A (right to education) and modified Article 45; it followed the Unni Krishnan judgment but expanded rather than overcame rights.

➤ **Study tip**: the 1st Amendment (Ninth Schedule, reasonable restrictions on speech), 24th/25th/29th (post-Golaknath, Kesavananda), 42nd (Swaran Singh Committee), 44th (property removed from FRs) are the standard 'amendments vs judgments' set.

STATIC + CURRENT AFFAIRS LINK

- Static: Amendment–judgment pairs (Gopalan, Golaknath, Kesavananda, Minerva Mills). Current affairs: Basic structure debate; 105th Amendment (2021, SEBC lists) reversing the Maratha quota judgment; 103rd Amendment (EWS quota) upheld in 2022.

SOURCES

1. M. Laxmikanth – Indian Polity (Constitutional Amendments)
2. Durga Das Basu – Introduction to the Constitution of India
3. Supreme Court of India – Kesavananda Bharati, Minerva Mills judgments

Question 15 | Polity / Constitutional and Statutory Bodies

Consider the following organizations/bodies in India:
1. The National Commission for Backward Classes
2. The National Human Rights Commission
3. The National Law Commission
4. The National Consumer Disputes Redressal Commission

How many of the above are constitutional bodies?
(a) Only one
(b) Only two
(c) Only three
(d) All four

ANSWER: (UPSC Set B): (a) Only one
DETAILED EXPLANATION

- **National Commission for Backward Classes** – constitutional body (Article 338B, inserted by the 102nd Amendment Act, 2018).
- **National Human Rights Commission** – statutory body under the Protection of Human Rights Act, 1993.
- **National Law Commission** – executive/non-statutory body constituted by a Government resolution.
- **National Consumer Disputes Redressal Commission** – statutory body under the Consumer Protection Act (2019 earlier 1986).

➤ **Only one is constitutional** – option (a).

STATIC + CURRENT AFFAIRS LINK

- Static: Constitutional vs statutory vs executive bodies (Laxmikanth). Current affairs: NCBC's role in the OBC sub-categorisation (Rohini Commission on sub-categorisation of OBCs – report submitted July 2023); 22nd Law Commission term extended (2023).

SOURCES

1. M. Laxmikanth – Indian Polity (Constitutional/non-constitutional bodies)
2. NCBC – ncbc.nic.in
3. Ministry of Law and Justice – lawmin.gov.in

Question 16 | Polity / President

Consider the following statements:

1. If the election of the President of India is declared void by the Supreme Court of India, all acts done by him/her in the performance of duties of his/her office of President before the date of decision become invalid.
2. Election for the post of the President of India can be postponed on the ground that some Legislative Assemblies have been dissolved and elections are yet to take place.
3. When a Bill is presented to the President of India, the Constitution prescribes time limits within which he/she has to declare his/her assent.

How many of the above statements are correct?

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

ANSWER: (UPSC Set B): (d) None

DETAILED EXPLANATION

- **Statement 1** – Under Article 71(2), acts done by the President before the Supreme Court declares the election void remain valid and are not invalidated.
- **Statement 2** – Article 62: the election must be held before the expiry of the term. Under Article 71(3), the election cannot be challenged on the ground of any vacancy in the electoral college, including dissolved assemblies.
- **Statement 3** – Article 111 gives no time limit for the President's assent (this is the basis of the 'pocket veto').

➤ **None is correct** – option (d).

STATIC + CURRENT AFFAIRS LINK

- Static: Articles 54–62, 71, 111; election disputes go to the Supreme Court. Current affairs: Presidential election 2022 (Droupadi Murmu); debate on time limits for assent (State Governors, 2023 Supreme Court cases of Tamil Nadu, Punjab, Kerala).

SOURCES

1. M. Laxmikanth – Indian Polity (President; Election)
2. Constitution of India – Articles 62, 71, 111 (legislative.gov.in)
3. Election Commission of India – eci.gov.in

Question 17 | Polity / Parliament

With reference to Finance Bill and Money Bill in the Indian Parliament, consider the following statements:

1. When the Lok Sabha transmits Finance Bill to the Rajya Sabha, it can amend or reject the Bill.
2. When the Lok Sabha transmits Money Bill to the Rajya Sabha, it cannot amend or reject the Bill, it can only make recommendations.
3. In the case of disagreement between the Lok Sabha and the Rajya Sabha, there is no joint sitting for Money Bill, but a joint sitting becomes necessary for Finance Bill.

How many of the above statements are correct?

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

ANSWER: (UPSC Set B): (b) Only two

DETAILED EXPLANATION

- **Statement 1** – Correct. A Finance Bill that is not a Money Bill (Article 117 Financial Bills) must be passed by both Houses; the Rajya Sabha has full powers to amend or reject it.
- **Statement 2** – Correct. Under Article 109, the Rajya Sabha can only make recommendations on a Money Bill within 14 days; the Lok Sabha may accept or reject them.
- **Statement 3** – Incorrect. A joint sitting (Article 108) is a possible, not a compulsory, way to resolve deadlock on an ordinary or Financial Bill; it is never available for Money Bills or Constitution Amendment Bills. The word 'necessary' makes the statement wrong.

➤ **Two correct** – option (b). Note: the annual Union Finance Bill is generally certified a Money Bill by the Speaker; the question is built on the general constitutional categories.

STATIC + CURRENT AFFAIRS LINK

- Static: Money Bill (Art. 110), Financial Bills I and II (Art. 117), Article 109 and 108. Current affairs: Aadhaar Act and Finance Act 2017 certified as Money Bills – Supreme Court's 2018/2019 judgments and the pending larger-bench reference on Money Bill certification.

SOURCES

1. M. Laxmikanth – Indian Polity (Parliament; Legislative Process)
2. Constitution of India – Articles 108–110, 117
3. PRS Legislative Research – prsindia.org

Question 18 | Environment / Wildlife Protection Act

Consider the following statements: Once the Central Government notifies an area as a 'Community Reserve'

1. the Chief Wildlife Warden of the State becomes the governing authority of such forest
2. hunting is not allowed in such area
3. people of such area are allowed to collect non-timber forest produce
4. people of such area are allowed traditional agricultural practices

How many of the above statements are correct?

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

ANSWER: (UPSC Set B): (b) Only two

DETAILED EXPLANATION

- **Statement 1** – Incorrect. Community Reserves (Section 36C, Wildlife Protection Act 1972, inserted in 2002) are managed by a Community Reserve Management Committee, not the Chief Wildlife Warden. (Strictly, the State Government, not the Centre, declares them.)
- **Statement 2** – Correct. Hunting is prohibited in a Community Reserve.
- **Statement 3** – Correct. Local communities continue to collect non-timber forest produce, and their customary uses are protected.
- **Statement 4** – Incorrect as per the official key; Section 36C does not grant an open entitlement to agriculture – land use in a Community Reserve is governed by the Management Committee's plan approved by the State Government.

➤ **Two correct** – option (b).

STATIC + CURRENT AFFAIRS LINK

- Static: Protected area network – National Parks, Sanctuaries, Conservation and Community Reserves; Wildlife (Protection) Amendment Act 2022. Current affairs: Wildlife (Protection) Amendment Act, 2022 (in force 2023) – CITES implementation and changes to protected-area provisions; community-conserved areas push; Cheetah reintroduction at Kuno (Sept 2022).

SOURCES

1. Shankar IAS – Environment (Protected Areas)
2. Wildlife (Protection) Act, 1972 as amended – indiacode.nic.in
3. MoEFCC – moef.gov.in

Question 19 | Polity / Scheduled Areas

With reference to Scheduled Areas in India, consider the following statements:

1. Within a State, the notification of an area as Scheduled Area takes place through an Order of the President.
2. The largest administrative unit forming the Scheduled Area is the District and the lowest is the cluster of villages in the Block.
3. The Chief Ministers of the concerned States are required to submit annual reports to the Union Home Ministry on the administration of Scheduled Areas in the States.

How many of the above statements are correct?

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

ANSWER: (UPSC Set B): (b) Only two
DETAILED EXPLANATION

- **Statement 1** – Correct. Under Fifth Schedule, para 6, the President by order declares an area a Scheduled Area (after consulting the Governor); the States concerned do not notify it.
- **Statement 2** – Correct. Scheduled Areas are generally demarcated as entire districts, blocks, or clusters of villages in a block – the district being the largest and the cluster of villages the smallest unit.
- **Statement 3** – Incorrect. Under para 3 of the Fifth Schedule, the Governor (not the Chief Minister) submits an annual report to the President on the administration of Scheduled Areas.

➤ **Two correct** – option (b).
STATIC + CURRENT AFFAIRS LINK

- Static: Fifth and Sixth Schedules; PESA Act 1996; Tribes Advisory Council. Current affairs: PESA implementation by States (e.g., Rajasthan, Maharashtra rules 2023); Forest Conservation (Amendment) Act 2023 and tribal rights concerns; PM-JANMAN (Nov 2023).

SOURCES
1. M. Laxmikanth – Indian Polity (Scheduled and Tribal Areas)
2. Constitution of India – Fifth Schedule
3. Ministry of Tribal Affairs – tribal.nic.in

Question 20 | Polity / Reservation

Consider the following statements:
Statement-I: The Supreme Court of India has held in some judgements that the reservation policies made under Article 16(4) of the Constitution of India would be limited by Article 335 for maintenance of efficiency of administration.
Statement-II: Article 335 of the Constitution of India defines the term 'efficiency of administration'.
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 is the correct explanation for Statement-I
(b) Both Statement-I and Statement-II are correct and Statement-II is not the correct explanation for Statement-I
(c) Statement-I is correct but Statement-II is incorrect
(d) Statement-I is incorrect but Statement-II is correct

ANSWER: (UPSC Set B): (c) Statement-I is correct but Statement-II is incorrect
DETAILED EXPLANATION

- **Statement-I** – Correct. In cases such as Indra Sawhney (1992) and M. Nagaraj (2006), the Court held that reservation in services must be reconciled with the maintenance of efficiency of administration under Article 335.
- **Statement-II** – Incorrect. Article 335 only says that claims of SCs and STs shall be taken into consideration consistently with maintenance of efficiency; it does not define 'efficiency of administration'. (The 82nd Amendment added a proviso permitting relaxation in qualifying marks.)

➤ **Answer (c)** – Statement-I correct, Statement-II incorrect.
STATIC + CURRENT AFFAIRS LINK

- Static: Articles 15(4), 16(4), 16(4A), 335, 338; Indra Sawhney, M. Nagaraj, Jarnail Singh (2018). Current affairs: Janhit Abhiyan v. Union of India (EWS quota, Nov 2022); promotion-reservation hearings; caste census debate.

SOURCES
1. M. Laxmikanth – Indian Polity (Reservation; Article 335)
2. Supreme Court judgments – Indra Sawhney (1992), M. Nagaraj (2006)
3. Constitution of India – legislative.gov.in

Question 21 | Economy / Energy

Consider the following statements:
Statement-I: India, despite having uranium deposits, depends on coal for most its electricity production.
Statement-II: Uranium, enriched to the extent of at least 60%, is required for the production of electricity.
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 is the correct explanation for Statement-I
(b) Both Statement-I and Statement-II are correct and Statement-II is not the correct explanation for Statement-I
(c) Statement-I is correct but Statement-II is incorrect
(d) Statement-I is incorrect but Statement-II is correct

ANSWER: (UPSC Set B): (c) Statement-I is correct but Statement-II is incorrect
DETAILED EXPLANATION

- **Statement-I** – Correct. Coal-based plants supply about 70 per cent of India's electricity; nuclear power is only about 3 per cent because of limited domestic uranium reserves of low grade and past fuel-supply constraints.
- **Statement-II** – Incorrect. India's PHWRs run on natural uranium (about 0.7% U-235); light-water reactors use low-enriched uranium (3–5%). Enrichment of 60% or more is not needed for power production (weapon-grade is above 90%).

➤ Answer (c).

STATIC + CURRENT AFFAIRS LINK
Static: Nuclear fuel cycle; India's three-stage nuclear programme (thorium); Atomic Energy Act 1962. Current affairs: Fleet-mode PHWR approval (2017, ten 700 MW units) and Kudankulam units; Nuclear Energy Mission for viksit Bharat (2025 Budget – 100 GW nuclear target by 2047).

SOURCES
1. Department of Atomic Energy – dae.gov.in
2. Nuclear Power Corporation of India – npcil.nic.in
3. NCERT Class 12 Geography – India: People and Economy (Energy resources)

Question 22 | Ecology / Biodiversity

Consider the following statements:
Statement-I: Marsupials are not naturally found in India.
Statement-II: Marsupials can thrive only in montane grasslands with no predators.
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 is the correct explanation for Statement-I
(b) Both Statement-I and Statement-II are correct and Statement-II is not the correct explanation for Statement-I
(c) Statement-I is correct but Statement-II is incorrect
(d) Statement-I is incorrect but Statement-II is correct

ANSWER: (UPSC Set B): (c) Statement-I is correct but Statement-II is incorrect
DETAILED EXPLANATION

- **Statement-I** – Correct. Marsupials are native to Australasia (kangaroos, koalas, wombats) and the Americas (opossums); no marsupial occurs naturally in India.
- **Statement-II** – Incorrect. Marsupials live in many habitats – rainforests, deserts, woodlands, grasslands – and coexist with predators; they are not restricted to predator-free montane grasslands.

➤ Answer (c).

STATIC + CURRENT AFFAIRS LINK

- Static: Biogeographic realms (Australasian realm), evolution and continental drift, convergent evolution. Current affairs: Koala and Tasmanian devil conservation news; invasive alien species concerns.

SOURCES
1. NCERT Class 12 Biology – Biodiversity and Conservation
2. Shankar IAS – Environment (Biodiversity)

3. IUCN Red List – iucnredlist.org

Question 23 | Environment / International Organisations

'Invasive Species Specialist Group' (that develops Global Invasive Species Database) belongs to which one of the following organizations?
(a) The International Union for Conservation of Nature
(b) The United Nations Environment Programme
(c) The United Nations World Commission for Environment and Development
(d) The World Wide Fund for Nature

ANSWER: (UPSC Set B): (a) The International Union for Conservation of Nature
DETAILED EXPLANATION

- **Option (a)** – The ISSG is part of the IUCN Species Survival Commission (SSC) and maintains the Global Invasive Species Database (GISD) and the '100 of the World's Worst Invasive Alien Species' list.
- **Option (b)** – UNEP is the UN environmental programme (Nairobi), not the ISSG's parent.
- **Option (c)** – The World Commission on Environment and Development (Brundtland Commission, 1987) gave the 'sustainable development' definition.

Option (d) – WWF runs the Living Planet Report and global campaigns, not the GISD.
STATIC + CURRENT AFFAIRS LINK

- Static: IUCN Red List categories; invasive alien species (Lantana, water hyacinth, Prosopis juliflora). Current affairs: IPBES Invasive Alien Species Assessment (September 2023); India's Biological Diversity (Amendment) Act 2023; Kunming–Montreal Global Biodiversity Framework (Dec 2022) target on invasive species.

SOURCES
1. IUCN SSC ISSG – iucngisd.org
2. IPBES – ipbes.net
3. Shankar IAS – Environment

Question 24 | Ecology / Fauna

Consider the following fauna:
1. Lion-tailed Macaque
2. Malabar Civet
3. Sambar Deer

How many of the above are generally nocturnal or most active after sunset?
(a) Only one
(b) Only two
(c) All three
(d) None

ANSWER: (UPSC Set B): (a) Only one
DETAILED EXPLANATION

- **Lion-tailed Macaque** – Diurnal and arboreal; endemic to the Western Ghats rainforests.
- **Malabar Civet** – Nocturnal and solitary, Critically Endangered, found in the Western Ghats and Malabar coast.
- **Sambar Deer** – Treated by the key as not clearly nocturnal. (Sambar are often crepuscular – active at dusk, night and dawn – so this item is debatable, but the official key accepts only one.)

➤ **Only the Malabar Civet qualifies** – option (a).
STATIC + CURRENT AFFAIRS LINK

- Static: Western Ghats endemic fauna; IUCN statuses (Lion-tailed Macaque – Endangered; Malabar Civet – CR). Current affairs: Western Ghats and Sanjay Gandhi NP; wildlife corridors; Wildlife Protection Amendment Act 2022.

SOURCES
1. IUCN Red List – iucnredlist.org
2. Wildlife Institute of India – wii.gov.in

3. Shankar IAS – Environment (Species in news)

Question 25 | Ecology / Animal Behaviour

Which of the following organisms perform waggle dance for others of their kin to indicate the direction and the distance to a source of their food?
(a) Butterflies
(b) Dragonflies
(c) Honeybees
(d) Wasps

ANSWER: (UPSC Set B): (c) Honeybees
DETAILED EXPLANATION
- **Option (c)** – Honeybees (Apis) communicate food-source direction (angle relative to the sun) and distance (duration of the waggle run) through the waggle dance, discovered by Karl von Frisch (Nobel Prize 1973).
- **Options (a), (b), (d)** – Butterflies, dragonflies and wasps do not perform this symbolic dance.

STATIC + CURRENT AFFAIRS LINK
- Static: Animal communication; pollination. Current affairs: Honey Mission (KVIC); 'Sweet Revolution' and National Beekeeping and Honey Mission (NBHM); decline of pollinators; IPBES pollinator assessments.

SOURCES
1. NCERT Class 12 Biology – Organisms and Populations
2. KVIC – kvic.gov.in (Honey Mission)
3. Nobel Prize 1973 – nobelprize.org

Question 26 | Science / Biology – Fungi

Consider the following statements:
1. Some mushrooms have medicinal properties.
2. Some mushrooms have psycho-active properties.
3. Some mushrooms have insecticidal properties.
4. Some mushrooms have bioluminescent properties.

How many of the above statements are correct?
(a) Only one
(b) Only two
(c) Only three
(d) All four

ANSWER: (UPSC Set B): (d) All four
DETAILED EXPLANATION
- **Statement 1** – Correct. Reishi (Ganoderma), shiitake and Cordyceps are used medicinally (Cordyceps is a fungus parasitising insects).
- **Statement 2** – Correct. 'Magic mushrooms' (Psilocybe species) contain psilocybin, a psychoactive compound.
- **Statement 3** – Correct. Some mushrooms (for example, fly agaric, Amanita muscaria) contain compounds that kill insects such as flies.
- **Statement 4** – Correct. Bioluminescent fungi include Armillaria, Mycena and Panellus ('foxfire').

➤ **All four are correct** – option (d).

STATIC + CURRENT AFFAIRS LINK
- Static: Fungal diversity; mycoremediation; medicinal fungi. Current affairs: Psilocybin therapy trials; Cordyceps (yartsagunbu) overharvesting in the Himalaya; 'Gucchi' morel mushroom GI discussions; bioluminescent mushrooms in the news.

SOURCES
1. NCERT Class 11 Biology – Biological Classification (Kingdom Fungi)
2. Shankar IAS – Environment

3. ICAR – icar.org.in (mushroom research)

Question 27 | Ecology / Fauna

Consider the following statements regarding the Indian squirrels:
1. They build nests by making burrows in the ground.
2. They store their food materials like nuts and seeds in the ground.
3. They are omnivorous.

How many of the above statements are correct?
(a) Only one
(b) Only two
(c) All three
(d) None

ANSWER: (UPSC Set B): (b) Only two
DETAILED EXPLANATION

- **Statement 1** – Incorrect. Indian palm squirrels and giant squirrels are largely arboreal and build leafy nests (dreys) or use tree hollows, not ground burrows.
- **Statement 2** – Correct. Squirrels scatter-hoard nuts and seeds by burying them in the ground, which also helps seed dispersal.
- **Statement 3** – Correct. Their diet includes nuts, seeds, fruits, flowers, bark, insects, eggs and even nestlings.

➤ **Two correct** – option (b).
STATIC + CURRENT AFFAIRS LINK

- Static: Indian squirrel species – Indian giant squirrel (Schedule II), Indian palm squirrel, flying squirrels; seed dispersal. Current affairs: Malabar giant squirrel in Bhimashankar and Western Ghats; Grizzled giant squirrel at Srivilliputhur–Megamalai.

SOURCES
1. Wildlife Institute of India / ENVIS – wii.gov.in
2. Shankar IAS – Environment (Species)
3. IUCN Red List – iucnredlist.org

Question 28 | Science / Extremophiles

Consider the following statements:
1. Some microorganisms can grow in environments with temperature above the boiling point of water.
2. Some microorganisms can grow in environments with temperature below the freezing point of water.
3. Some microorganisms can grow in highly acidic environment with a pH below 3.

How many of the above statements are correct?
(a) Only one
(b) Only two
(c) All three
(d) None

ANSWER: (UPSC Set B): (c) All three
DETAILED EXPLANATION

- **Statement 1** – Correct. Hyperthermophiles such as Pyrolobus fumarii (up to about 113°C) and 'Strain 121' (grows at 121°C) live around deep-sea hydrothermal vents under high pressure.
- **Statement 2** – Correct. Psychrophiles live in Antarctic ice, permafrost and brine channels well below 0°C.
- **Statement 3** – Correct. Acidophiles such as Picrophilus and Acidithiobacillus thrive at pH 0–3 (acid mine drainage, hot springs).

➤ **All three** – option (c).
STATIC + CURRENT AFFAIRS LINK

- Static: Extremophiles – thermophiles, psychrophiles, acidophiles, halophiles; astrobiology. Current affairs: Search for life on Mars and Europa; microbial life under Antarctic ice; bioprospecting; Taq polymerase (from the thermophile Thermus aquaticus) used in PCR tests.

SOURCES

1. NCERT Class 11 Biology – Biological Classification (Archaebacteria)
2. NASA Astrobiology – astrobiology.nasa.gov
3. Shankar IAS – Environment

Question 29 | Ecology / Animal Behaviour

Which one of the following makes a tool with a stick to scrape insects from a hole in a tree or a log of wood?

(a) Fishing cat
(b) Orangutan
(c) Otter
(d) Sloth Bear

ANSWER: (UPSC Set B): (b) Orangutan

DETAILED EXPLANATION

- **Option (b)** – Orangutans (Pongo) make and use tools: they modify sticks to extract insects (termites, ants) from tree holes and to extract seeds from fruit (Neesia).
- **Option (a)** – Fishing cats hunt fish by diving or paddling in water; no tool use.
- **Option (c)** – Otters use stones to crack shellfish (sea otters) but do not scrape insects with a stick.
- **Option (d)** – Sloth bears use long claws and suck up termites; they do not use tools.

➤ **Note**: Q29 was missing from the typed question PDF supplied (its numbering jumps from 28 to 30). The question text was recovered from the UPSC paper and matches the Set B key entry for Q29 (b).

STATIC + CURRENT AFFAIRS LINK

- Static: Animal cognition and tool use (chimpanzees, orangutans, crows); great apes of Asia. Current affairs: Sumatran orangutan 'Rakus' treating a wound with a medicinal plant (reported 2024); orangutan habitat loss from palm-oil expansion; IUCN Critically Endangered status.

SOURCES

1. IUCN Red List – iucnredlist.org (Pongo)
2. Shankar IAS – Environment (Species in news)
3. Scientific Reports (2024) – orangutan wound treatment

Question 30 | Environment / Climate – HFCs

Consider the following:

1. Aerosols
2. Foam agents
3. Fire retardants
4. Lubricants

In the making of how many of the above are hydrofluorocarbons used?

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

ANSWER: (UPSC Set B): (c) Only three

DETAILED EXPLANATION

1. Aerosols – HFCs (for example HFC-134a, HFC-152a) are used as aerosol propellants.
2. Foam agents – HFCs serve as blowing agents in insulation foams.
3. Fire retardants – HFCs (such as HFC-227ea, HFC-236fa) are used as fire-extinguishing/suppression agents, replacing halons.
4. Lubricants – HFCs are not used in making lubricants (they are refrigerants; the compressor lubricant is separate).

➤ **Three** – option (c).

STATIC + CURRENT AFFAIRS LINK

- Static: Ozone-depleting substances vs greenhouse gases; Montreal Protocol and Kigali Amendment (2016). Current affairs: India's HFC phase-down plan (starting 2032, 85% reduction by 2047); India Cooling Action Plan; Cabinet approval of Kigali Amendment ratification (August 2021).

SOURCES

1. UNEP Ozone Secretariat – ozone.unep.org
2. MoEFCC – ozonecell.nic.in
3. Shankar IAS – Environment (Ozone depletion)

Question 31 | Geography / Lakes and Wetlands

Consider the following statements:

1. Jhelum River passes through Wular Lake.
2. Krishna River directly feeds Kolleru Lake.
3. Meandering of Gandak River formed Kanwar Lake.

How many of the statements given above are correct?

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

ANSWER: (UPSC Set B): (a) Only one

DETAILED EXPLANATION

- **Statement 1** – Correct. The Jhelum enters and leaves Wular Lake (Kashmir), the largest freshwater lake in India and a Ramsar site.
- **Statement 2** – Incorrect. Kolleru (Andhra Pradesh, Ramsar site) lies between the Krishna and Godavari deltas and is fed mainly by the seasonal Budameru and Tammileru streams and irrigation canals; the Krishna does not feed it directly.
- **Statement 3** – Treated as incorrect by the key. Kanwar Lake (Kabartal, Begusarai, Bihar; Ramsar site 2020) is an oxbow lake formed by meandering of the Burhi Gandak, a river distinct from the Gandak.

➤ **Only one correct** – option (a). Sources differ on statement 3 (some treat 'Gandak' loosely), but the official key settles on (a).

STATIC + CURRENT AFFAIRS LINK

- Static: Lake types – tectonic, oxbow, lagoon, glacial; Ramsar convention. Current affairs: India's Ramsar sites rose to 75 in August 2022 and crossed 80 by 2024; Wular Lake restoration; Kabartal declared a Ramsar site in 2020.

SOURCES

1. Ramsar Convention – ramsar.org
2. Ministry of Environment – moef.gov.in (Wetlands)
3. NCERT Class 11 – Fundamentals of Physical Geography

Question 32 | Geography / Ports

Consider the following pairs:

Port	Well known as
1. Kamarajar Port	First major port in India registered as a company
2. Mundra Port	Largest privately owned port in India
3. Visakhapatnam	Largest container port in India

How many of the above pairs are correctly matched?

(a) Only one pair
(b) Only two pairs
(c) All three pairs

(d) None of the pairs

ANSWER: (UPSC Set B): (b) Only two pairs
DETAILED EXPLANATION

- **Pair 1** – Correct. Kamarajar Port (formerly Ennore, Tamil Nadu) became the first major port to be corporatised as a company under the Companies Act (2001).
- **Pair 2** – Correct. Mundra (Gujarat), run by Adani, is India's largest private port by cargo.
- **Pair 3** – Incorrect. The largest container port is Jawaharlal Nehru Port (Nhava Sheva, Mumbai). Visakhapatnam is a major bulk-cargo port.

➤ **Two correct** – option (b).

STATIC + CURRENT AFFAIRS LINK

- Static: Major ports of India; east and west coast ports. Current affairs: Sagarmala; Major Port Authorities Act 2021; Vadhavan port (Maharashtra) approved; India–Middle East–Europe Economic Corridor (IMEC, Sept 2023).

SOURCES

1. Ministry of Ports, Shipping and Waterways – shipmin.gov.in
2. NCERT Class 12 Geography – India: People and Economy (Transport)
3. Sagarmala – sagarmala.gov.in

Question 33 | Geography / Vegetation

Consider the following trees:
1. Jackfruit (Artocarpus heterophyllus)
2. Mahua (Madhuca indica)
3. Teak (Tectona grandis)

How many of the above are deciduous trees?
(a) Only one
(b) Only two
(c) All three
(d) None

ANSWER: (UPSC Set B): (b) Only two
DETAILED EXPLANATION

- **Jackfruit** – An evergreen tree of tropical regions (Western Ghats).
- **Mahua** – A deciduous tree of central and eastern India; it sheds leaves in February–March and flowers before new leaves emerge.
- **Teak** – A deciduous tree of the tropical moist and dry deciduous forests.

➤ **Two** – option (b).

STATIC + CURRENT AFFAIRS LINK

- Static: Forest types – tropical moist deciduous (teak, sal), dry deciduous, evergreen. Current affairs: Mahua as a source of tribal livelihood; Madhya Pradesh's heritage liquor policy for mahua (2021) and the MSP-for-minor-forest-produce scheme; India State of Forest Report 2021/2023.

SOURCES

1. NCERT Class 11 – India: Physical Environment (Natural Vegetation)
2. Forest Survey of India – fsi.nic.in
3. Shankar IAS – Environment

Question 34 | Geography / Agriculture – India vs China

Consider the following statements:
1. India has more arable area than China.
2. The proportion of irrigated area is more in India as compared to China.
3. The average productivity per hectare in Indian agriculture is higher than that in China.

How many of the above statements are correct?
(a) Only one
(b) Only two

(c) All three
(d) None

ANSWER: (UPSC Set B): (a) Only one
DETAILED EXPLANATION

- **Statement 1** – Accepted as correct. On World Bank/FAO figures, India has about 156–180 million ha of arable/cropland against roughly 120–165 million ha for China, because much of China is mountain, desert and plateau.
- **Statement 2** – Not accepted. Estimates of irrigated share differ by year and denominator; official figures treat China as irrigating an equal or greater share of its cultivated land, so the key does not count this statement.
- **Statement 3** – Incorrect. China's yields per hectare (rice, wheat, maize, cotton) are far higher than India's, from heavier fertiliser use, better irrigation and technology.

➤ **Only one** – option (a). Some coaching sites cite irrigation ratios of 48% (India) versus 41% (China) and mark (b); the official key is (a), which is followed here.

STATIC + CURRENT AFFAIRS LINK

- Static: Land use; agricultural productivity; Green Revolution; irrigation sources. Current affairs: India overtaking China as most populous country (April 2023); India's agricultural exports; PM Krishi Sinchayee Yojana; International Year of Millets 2023.

SOURCES

1. FAO – FAOSTAT (fao.org/faostat)
2. World Bank – data.worldbank.org
3. NCERT Class 12 Geography – India: People and Economy (Land Resources and Agriculture)

Question 35 | Geography / Coastal Landforms

Which one of the following is the best example of repeated falls in sea level, giving rise to present-day extensive marshland?

(a) Bhitarkanika Mangroves
(b) Marakkanam Salt Pans
(c) Naupada Swamp
(d) **Rann of Kutch**

ANSWER: (UPSC Set B): (d) Rann of Kutch
DETAILED EXPLANATION

- **Option (d)** – The Rann of Kutch (Gujarat) is a vast seasonal salt marsh formed as the sea retreated repeatedly (aided by tectonic uplift) from a former shallow sea/lagoon, leaving saline flats that flood in monsoon.
- **Option (a)** – Bhitarkanika mangroves (Odisha) are deltaic mangroves of the Brahmani–Baitarani delta.
- **Option (b)** – Marakkanam salt pans (Tamil Nadu) are man-made salt evaporation pans.
- **Option (c)** – Naupada swamp (Srikakulam, Andhra Pradesh) is a coastal estuarine swamp.

STATIC + CURRENT AFFAIRS LINK

- Static: Coastal emergence/submergence; Kutch geology. Current affairs: Dholavira – UNESCO World Heritage Site (July 2021); Rann Utsav and Great Rann of Kutch tourism; Banni grasslands; Wild ass sanctuary.

SOURCES

1. NCERT Class 11 – Fundamentals of Physical Geography
2. Geological Survey of India – gsi.gov.in
3. UNESCO – whc.unesco.org (Dholavira)

Question 36 | Geography / Minerals

Ilmenite and rutile, abundantly available in certain coastal tracts of India, are rich sources of which one of the following?

(a) Aluminium
(b) Copper

(c) Iron
(d) Titanium

ANSWER: (UPSC Set B): (d) Titanium
DETAILED EXPLANATION

- **Option (d)** – Ilmenite (FeTiO3) and rutile (TiO2) are principal ores of titanium, found in the monazite-rich beach sands of Kerala, Tamil Nadu, Odisha and Andhra Pradesh.
- **Option (a)** – Aluminium comes from bauxite.
- **Option (b)** – Copper comes from chalcopyrite and similar sulphide ores.
- **Option (c)** – Iron ore is haematite and magnetite (ilmenite contains iron but is mainly worked for titanium).

STATIC + CURRENT AFFAIRS LINK

- Static: Mineral distribution; beach placer deposits (monazite, ilmenite, zircon). Current affairs: MMDR Amendment Act 2023 removed lithium, beryllium, niobium, titanium, tantalum and zirconium from the 'atomic minerals' list, opening them to private mining; Offshore Areas Minerals Act amendments 2023.

SOURCES

1. Indian Bureau of Mines – ibm.gov.in
2. Ministry of Mines – mines.gov.in
3. NCERT Class 12 – India: People and Economy (Minerals and Energy Resources)

Question 37 | Geography / World Resources

About three-fourths of world's cobalt, a metal required for the manufacture of batteries for electric motor vehicles, is produced by

(a) Argentina
(b) Botswana
(c) the Democratic Republic of the Congo
(d) Kazakhstan

ANSWER: (UPSC Set B): (c) the Democratic Republic of the Congo
DETAILED EXPLANATION

- **Option (c)** – The DRC produces roughly 70% of the world's cobalt, mostly as a by-product of copper mining in Katanga.
- **Options (a), (b), (d)** – Argentina is a lithium producer (the 'Lithium Triangle'); Botswana is known for diamonds; Kazakhstan produces chromium, uranium and some cobalt but not the bulk.

STATIC + CURRENT AFFAIRS LINK

- Static: Critical minerals; resource geopolitics. Current affairs: India's critical mineral list (30 minerals, 2023); KABIL's overseas lithium deals; Minerals Security Partnership; National Critical Mineral Mission (2025); child-labour and ESG concerns in DRC cobalt mining.

SOURCES

1. USGS Mineral Commodity Summaries – usgs.gov
2. Ministry of Mines – mines.gov.in
3. IEA – iea.org (Critical Minerals)

Question 38 | Geography / World – Africa

Which one of the following is a part of the Congo Basin?

(a) Cameroon
(b) Nigeria
(c) South Sudan
(d) Uganda

ANSWER: (UPSC Set B): (a) Cameroon
DETAILED EXPLANATION

- **Option (a)** – Cameroon is one of the six Congo Basin countries (Cameroon, Central African Republic, Republic of Congo, DRC, Equatorial Guinea, Gabon).

- **Options (b), (c), (d)** – Nigeria is in the Niger Basin/Gulf of Guinea; South Sudan and Uganda lie mainly in the Nile Basin.

STATIC + CURRENT AFFAIRS LINK

- Static: Equatorial rainforests – Amazon, Congo, Indonesian; river basins of Africa. Current affairs: One Forest Summit (Libreville, Gabon, March 2023); Congo Basin pledge at COP26; carbon credit and forest finance debates.

SOURCES

1. NCERT Class 11 – Fundamentals of Physical Geography / Class 11 India and the World
2. Atlas of Africa – National Geographic
3. CIFOR – cifor.org (Congo Basin)

Question 39 | Geography / Indian Physiography

Consider the following statements:

1. Amarkantak Hills are at confluence of Vindhya and the Sahyadri Ranges.
2. Biligirirangan Hills constitute the easternmost part of Satpura Range.
3. Seshachalam Hills constitute the southernmost part of Western Ghats.

How many of the statements given above are correct?

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

ANSWER: (UPSC Set B): (d) None

DETAILED EXPLANATION

- **Statement 1** – Amarkantak (Madhya Pradesh–Chhattisgarh) is where the Vindhya and Satpura ranges meet; it is the source of the Narmada and Son. The Sahyadri is the Western Ghats.
- **Statement 2** – The Biligirirangan (BR) Hills in Karnataka lie where the Western and Eastern Ghats meet; the easternmost Satpura is Mahadeo/Maikal, not BR Hills.
- **Statement 3** – Seshachalam Hills (Andhra Pradesh) are part of the Eastern Ghats; the southernmost Western Ghats are the Agasthyamalai/Nilgiri-Anamalai region.

➤ **None is correct** – option (d).

STATIC + CURRENT AFFAIRS LINK

- Static: Peninsular plateau and hill ranges. Current affairs: Amarkantak as a Biosphere Reserve; Seshachalam Biosphere Reserve and the red sanders (Seshachalam) issue; BR Hills Tiger Reserve connectivity with Sathyamangalam.

SOURCES

1. NCERT Class 11 – India: Physical Environment, Ch. 2 (Structure and Physiography)
2. Survey of India – surveyofindia.gov.in
3. Majid Husain – Geography of India

Question 40 | Geography / Infrastructure & Connectivity

With reference to India's projects on connectivity, consider the following statements:

1. East-West Corridor under Golden Quadrilateral Project connects Dibrugarh and Surat.
2. Trilateral Highway connects Moreh in Manipur and Chiang Mai in Thailand via Myanmar.
3. Bangladesh-China-India-Myanmar Economic Corridor connects Varanasi in Uttar Pradesh with Kunming in China.

How many of the above statements are correct?

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

ANSWER: (UPSC Set B): (d) None

DETAILED EXPLANATION

- **Statement 1** – The East-West Corridor (NHDP) links Silchar (Assam) and Porbandar (Gujarat); it is separate from the Golden Quadrilateral, which connects Delhi–Mumbai–Chennai–Kolkata.
- **Statement 2** – The India–Myanmar–Thailand Trilateral Highway links Moreh (Manipur) to Mae Sot (Thailand), not Chiang Mai.
- **Statement 3** – The BCIM Economic Corridor was planned between Kolkata and Kunming via Dhaka and Mandalay, not Varanasi.

➤ **None is correct** – option (d).

STATIC + CURRENT AFFAIRS LINK

- Static: NHDP – Golden Quadrilateral, North-South and East-West corridors; India's Act East Policy. Current affairs: IMT Trilateral Highway extension to Laos–Vietnam; Kaladan Multi-Modal Project and Sittwe Port (operational from 2023); BCIM stalled amid China-India differences; India–Middle East–Europe Corridor (2023).

SOURCES

1. NHAI – nhai.gov.in
2. Ministry of External Affairs – mea.gov.in (Act East; Trilateral Highway)
3. NCERT Class 12 – India: People and Economy (Transport)

Question 41 | Economy / Capital Markets – InvITs

Consider the following statements:

Statement-I: Interest income from the deposits in Infrastructure Investment Trusts (InvITs) distributed to their investors is exempted from tax, but the dividend is taxable.

Statement-II: InvITs are recognized as borrowers under the 'Securitization and Reconstruction of Financial Assets and Enforcement of Security Interest Act, 2002'.

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 is the correct explanation for Statement-I

(b) Both Statement-I and Statement-II are correct and Statement-II is not the correct explanation for Statement-I

(c) Statement-I is correct but Statement-II is incorrect

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

ANSWER: (UPSC Set B): (d) Statement-I is incorrect but Statement-II is correct

DETAILED EXPLANATION

- **Statement-I** – Incorrect. InvITs are pass-through vehicles: interest passed on to unit-holders is taxable in their hands (with TDS); it is not exempt. The dividend component, on the other hand, is largely exempt in the investor's hands where the SPV pays tax at normal rates. The statement therefore reverses the position.
- **Statement-II** – Correct. InvITs/REITs, as SEBI-regulated trusts that raise funds from investors, are treated as 'borrowers' for the purposes of the SARFAESI Act, 2002.

➤ **Answer (d). Learn the structure**: sponsor → InvIT (trust, SEBI InvIT Regulations 2014) → SPVs holding infrastructure assets → units listed on exchanges.

STATIC + CURRENT AFFAIRS LINK

- Static: Capital market instruments – InvITs and REITs; SEBI. Current affairs: NHAI's InvIT and Raajmarg Infra Investment Trust (RIIT); Power Grid and IRB InvITs; National Monetisation Pipeline (2021–25).

SOURCES

1. SEBI – sebi.gov.in (InvIT Regulations 2014)
2. Income Tax Department – incometaxindia.gov.in
3. Economic Survey 2022–23, Chapter on Infrastructure

Question 42 | Economy / Monetary Policy

Consider the following statements:

Statement-I: In the post-pandemic recent past, many Central Banks worldwide had carried out interest rate hikes.

Statement-II: Central Banks generally assume that they have the ability to counteract the rising consumer prices via monetary policy means.

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 is the correct explanation for Statement-I

(b) Both Statement-I and Statement-II are correct and Statement-II is not the correct explanation for Statement-I

(c) Statement-I is correct but Statement-II is incorrect

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

ANSWER: (UPSC Set B): (a) Both Statement-I and Statement-II are correct and Statement-II is the correct explanation for Statement-I

DETAILED EXPLANATION

- **Statement-I** – Correct. After 2021, supply-chain disruption and the Ukraine war pushed inflation up; the US Federal Reserve, the ECB, the Bank of England and the RBI (repo rate raised from 4% to 6.5% between May 2022 and February 2023) all raised policy rates.
- **Statement-II** – Correct. Central banks use policy rates, liquidity operations and reserve requirements on the premise that tightening demand brings consumer-price inflation down.
- **Link** – Statement-II explains Statement-I: rate hikes were carried out because central banks believe monetary tightening can counter rising prices.

➤ Answer (a).

STATIC + CURRENT AFFAIRS LINK

- Static: Inflation targeting (4% ± 2%), Monetary Policy Committee (2016); repo, reverse repo, CRR, SLR. Current affairs: RBI's rate cycle 2022–23 and later pause; US Fed's tightening; Section 45ZN – RBI's report to Government when inflation target is missed (late 2022).

SOURCES

1. RBI – rbi.org.in (Monetary Policy Statements)
2. Economic Survey 2022–23, Chapter on Monetary Management
3. M. Laxmikanth/ Ramesh Singh – Indian Economy (Monetary Policy)

Question 43 | Environment & Economy / Carbon Markets

Consider the following statements:

Statement-I: Carbon markets are likely to be one of the most widespread tools in the fight against climate change.

Statement-II: Carbon markets transfer resources from the private sector to the State.

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 is the correct explanation for Statement-I

(b) Both Statement-I and Statement-II are correct and Statement-II is not the correct explanation for Statement-I

(c) Statement-I is correct but Statement-II is incorrect

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

ANSWER: (UPSC Set B): (b) Both Statement-I and Statement-II are correct and Statement-II is not the correct explanation for Statement-I

DETAILED EXPLANATION

- **Statement-I** – Correct. Compliance and voluntary carbon markets (cap-and-trade, offsets, and Article 6 of the Paris Agreement) are expected to expand widely as countries use them to meet their NDCs and net-zero goals.
- **Statement-II** – Accepted as correct by the official key. In a carbon market, emitters (mostly in the private sector) pay for allowances or credits; the money reaches those who cut or remove emissions, which may be State bodies, and States also earn revenue when they auction allowances or tax carbon. In that sense, resources flow from private emitters towards the State and other recipients.

➤ **Link** – Statement-II is not the correct explanation of Statement-I. It tells us who pays and who receives, not why carbon markets are expected to be widely used; that comes from countries' NDC commitments and the Article 6 framework.

➤ Answer (b). The wording of Statement-II is loose (money can also flow between private parties), so treat this as a question to be solved by elimination: Statement-I is clearly correct, and the key accepts Statement-II.

STATIC + CURRENT AFFAIRS LINK

- Static: Kyoto mechanisms; cap-and-trade vs baseline-and-credit; Article 6 of the Paris Agreement. Current affairs: Energy Conservation (Amendment) Act 2022 enabling India's Carbon Credit Trading Scheme (CCTS notified June 2023); Green Credit Programme (October 2023); COP27/28 Article 6 rules.

SOURCES

1. Bureau of Energy Efficiency – beeindia.gov.in (CCTS)
2. UNFCCC – unfccc.int (Article 6)
3. Ministry of Power / MoEFCC – Green Credit Programme

Question 44 | Economy / Monetary Management

Which one of the following activities of the Reserve Bank of India is considered to be part of 'sterilization'?

(a) Conducting 'Open Market Operations'
(b) Oversight of settlement and payment systems
(c) Debt and cash management for the Central and State Governments
(d) Regulating the functions of Non-banking Financial Institutions

ANSWER: (UPSC Set B): (a) Conducting 'Open Market Operations'

DETAILED EXPLANATION

- **Option (a)** – Sterilisation neutralises the effect of foreign-exchange intervention on domestic money supply. When the RBI buys dollars it injects rupees; it then sells government securities through Open Market Operations (and Market Stabilisation Scheme bonds) to withdraw that liquidity.
- **Option (b)** – Oversight of payment and settlement systems is a regulatory/financial stability function (Payment and Settlement Systems Act 2007).
- **Option (c)** – Debt and cash management is the RBI's role as banker and debt manager to governments.
- **Option (d)** – Regulating NBFCs is a supervisory function.

STATIC + CURRENT AFFAIRS LINK

Static: Money supply, forex intervention and the 'impossible trinity'; MSS (2004). Current affairs: RBI's forex intervention and reserves (about $600 bn in 2023); OMO and VRRR operations to manage liquidity.

SOURCES

1. RBI – rbi.org.in (Annual Report; Handbook of Statistics)
2. Ramesh Singh – Indian Economy (Monetary Policy)
3. Economic Survey 2022–23

Question 45 | Economy / Financial Markets

Consider the following markets:

1. Government Bond Market
2. Call Money Market
3. Treasury Bill Market
4. Stock Market

How many of the above are included in capital markets?

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

ANSWER: (UPSC Set B): (b) Only two

DETAILED EXPLANATION

1. **Government Bond Market** – Capital market (long-term securities, maturity above one year).
2. **Call Money Market** – Money market (overnight to 14-day inter-bank lending).
3. **Treasury Bill Market** – Money market (T-bills of 91, 182 and 364 days).
4. **Stock Market** – Capital market (equity and long-term securities).

➤ **Only two** – option (b). Rule of thumb: maturity up to one year → money market; longer → capital market.

STATIC + CURRENT AFFAIRS LINK

- Static: Money market vs capital market; primary vs secondary. Current affairs: Inclusion of Indian G-Secs in global bond indices (JP Morgan GBI-EM, announced September 2023, effective June 2024); RBI Retail Direct scheme (2021).

SOURCES

1. RBI – rbi.org.in (Financial Markets)
2. SEBI – sebi.gov.in
3. Ramesh Singh – Indian Economy

Question 46 | Economy / Agriculture

Which one of the following best describes the concept of 'Small Farmer Large Field'?

(a) Resettlement of a large number of people, uprooted from their countries due to war, by giving them a large cultivable land which they cultivate collectively and share the produce

(b) Many marginal farmers in an area organize themselves into groups and synchronize and harmonize selected agricultural operations

(c) Many marginal farmers in an area together make a contract with a corporate body and surrender their land to the corporate body for a fixed term for which the corporate body makes a payment of agreed amount to the farmers

(d) A company extends loans, technical knowledge and material inputs to a number of small farmers in an area so that they produce the agricultural commodity required by the company for its manufacturing process and commercial production

ANSWER: (UPSC Set B): (b) Many marginal farmers in an area organize themselves into groups and synchronize and harmonize selected agricultural operations

DETAILED EXPLANATION

Option (b) – 'Small Farmer Large Field' (SFLF), a concept used in countries such as Vietnam ('large field' model), has smallholders in an area group together and synchronise operations such as sowing, water management and harvesting, achieving economies of scale without losing land ownership.

Option (a) – Describes refugee resettlement/collective farm schemes.

Option (c) – Describes land leasing to a corporate body (corporate farming).

Option (d) – Describes contract farming/outgrower schemes.

STATIC + CURRENT AFFAIRS LINK

- Static: Land fragmentation; cooperative and contract farming; model Agricultural Land Leasing Act 2016. Current affairs: Scheme for 10,000 FPOs (2020); International Year of Millets 2023; digital agriculture mission and Agri-stack.

SOURCES

1. FAO – fao.org (Small farmers; farmer clusters)
2. NITI Aayog – Model Agricultural Land Leasing Act 2016
3. Ministry of Agriculture – agricoop.nic.in (FPO scheme)

Question 47 | Economy / Agriculture – Crops

Consider the following statements:

1. The Government of India provides Minimum Support Price for niger (Guizotia abyssinica) seeds.
2. Niger is cultivated as a Kharif crop.
3. Some tribal people in India use niger seed oil for cooking.

How many of the above statements are correct?

(a) Only one

(b) Only two

(c) All three

(d) None

ANSWER: (UPSC Set B): (c) All three
DETAILED EXPLANATION

- **Statement 1** – Correct. Nigerseed is among the 14 Kharif crops for which MSP is announced.
- **Statement 2** – Correct. It is sown mainly in June–August as a Kharif crop (also grown as a late-season crop in some regions), largely rainfed on marginal soils in Odisha, Chhattisgarh, Madhya Pradesh, Jharkhand, Maharashtra and Karnataka.
- **Statement 3** – Correct. Tribal communities use niger oil for cooking; it is also used for lighting and cosmetics.

➤ **All three** – option (c).
STATIC + CURRENT AFFAIRS LINK
Static: Oilseeds – groundnut, mustard, soybean, niger; MSP and CACP. Current affairs: National Mission on Edible Oils – Oil Palm and Oilseeds; MSP for Kharif 2023–24; International Year of Millets (2023).
SOURCES
1. CACP – cacp.dacnet.nic.in (Price policy for Kharif crops)
2. Ministry of Agriculture – agricoop.nic.in
3. ICAR – Indian Institute of Oilseeds Research

Question 48 | Economy / National Income & Investment

Consider the investments in the following assets:
1. Brand recognition
2. Inventory
3. Intellectual property
4. Mailing list of clients

How many of the above are considered intangible investments?
(a) Only one
(b) Only two
(c) Only three
(d) All four

ANSWER: (UPSC Set B): (c) Only three
DETAILED EXPLANATION

1. **Brand recognition** – Intangible asset (goodwill, brand equity).
2. **Inventory** – Tangible, working-capital asset.
3. **Intellectual property** – Intangible (patents, copyrights, trademarks).
4. **Mailing list of clients** – Intangible (customer data/relationships).

➤ **Only three** – option (c). Intangible investment: spending on non-physical assets – R&D, software, data, brands, training, organisational capital.
STATIC + CURRENT AFFAIRS LINK

- Static: Capital formation; tangible vs intangible assets (GFCF). Current affairs: Growth of intangible-heavy sectors in India's start-up ecosystem; national IPR policy; patent filings reaching record highs.

SOURCES
1. IMF/OECD – intangible investment literature (oecd.org)
2. Economic Survey – Chapter on Investment
3. Ramesh Singh – Indian Economy

Question 49 | Economy / Federalism – Finance Commission

Consider the following:
1. Demographic performance
2. Forest and ecology
3. Governance reforms
4. Stable government
5. Tax and fiscal efforts

For the horizontal tax devolution, the Fifteenth Finance Commission used how many of the above as criteria other than population, area and income distance?

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

ANSWER: (UPSC Set B): (b) Only three

DETAILED EXPLANATION

1. **Demographic performance** – Used (12.5% weight).
2. **Forest and ecology** – Used (10%).
3. **Governance reforms** – Not a criterion for horizontal devolution.
4. **Stable government** – Not a criterion.
5. **Tax and fiscal efforts** – Used (2.5%).

➤ **The criteria and weights**: income distance 45%, population (2011) 15%, area 15%, forest and ecology 10%, demographic performance 12.5%, tax and fiscal effort 2.5%. Three other criteria – option (b).

STATIC + CURRENT AFFAIRS LINK

- Static: Article 280; vertical vs horizontal devolution; 14th vs 15th FC criteria. Current affairs: 15th FC kept the States' share at 41% of the divisible pool; Sixteenth Finance Commission (chair Arvind Panagariya) constituted December 2023; debates on southern States and population weight.

SOURCES

1. Report of the Fifteenth Finance Commission – fincomindia.nic.in
2. M. Laxmikanth – Indian Polity (Finance Commission)
3. Ministry of Finance – finmin.nic.in

Question 50 | Economy / International Organisations

Consider the following infrastructure sectors:

1. Affordable housing
2. Mass rapid transport
3. Health care
4. Renewable energy

On how many of the above does UNOPS Sustainable Investments in Infrastructure and Innovation (S3i) initiative focus for its investments?

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

ANSWER: (UPSC Set B): (c) Only three

DETAILED EXPLANATION

1. **Affordable housing** – A core S3i investment area.
2. **Mass rapid transport** – Not among S3i's focus sectors.
3. **Health care infrastructure** – A S3i focus area.
4. **Renewable energy** – A S3i focus area.

➤ **Only three** – option (c). S3i (set up by the UN Office for Project Services) aimed to attract private capital into impact infrastructure in developing countries; it ran into major governance and financial-management failures, and the UNOPS Executive Board decided in 2023 to wind it down.

STATIC + CURRENT AFFAIRS LINK

- Static: UN specialised bodies vs UN offices (UNOPS, UNDP, UNEP). Current affairs: S3i scandal and review (2022–23); UNOPS role in procurement and infrastructure for aid; India–UN Development Partnership Fund and India's development cooperation in the Global South.

SOURCES

1. UNOPS – unops.org (S3i)
2. UN News – news.un.org
3. UNOPS Executive Board documents (2023)

Question 51 | Internal Security / Home Guards

With reference to Home Guards, consider the following statements:

1. Home Guards are raised under the Home Guards Act and Rules of the Central Government.
2. The role of the Home Guards is to serve as an auxiliary force to the police in maintenance of internal security.
3. To prevent infiltration on the international border/coastal areas, the Border Wing Home Guards Battalions have been raised in some States.

How many of the above statements are correct?

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

ANSWER: (UPSC Set B): (b) Only two

DETAILED EXPLANATION

- **Statement 1** – Incorrect. Home Guards are raised under the Home Guards Acts and Rules of the respective State Governments (for example, the Bombay Home Guards Act, 1947 and equivalents). The Centre frames policy and reimburses part of the cost.
- **Statement 2** – Correct. Home Guards serve as an auxiliary to the police in maintaining internal security, controlling communal disturbance, and disaster/emergency duties.
- **Statement 3** – Correct. Border Wing Home Guards (BWHG) battalions exist in border States (Punjab, Rajasthan, Gujarat, West Bengal, Assam, Meghalaya, Tripura) to assist the BSF; coastal Home Guards operate in coastal States.

➤ **Two correct** – option (b).

STATIC + CURRENT AFFAIRS LINK

- Static: Police as a State subject; auxiliary forces; Border Security architecture. Current affairs: Home Guards Raising Day (6 December); Vibrant Villages Programme (border areas); Coastal Security Scheme; MHA-led modernisation of State police forces.

SOURCES

1. Ministry of Home Affairs – mha.gov.in (Home Guards)
2. Directorate General of Civil Defence, Fire Services and Home Guards
3. M. Laxmikanth – Indian Polity (Centre–State relations; Police)

Question 52 | Polity & Internal Security / Laws

With reference to India, consider the following pairs:

Action	The Act under which it is covered
1. Unauthorized wearing of police or military uniforms	The Official Secrets Act, 1923
2. Knowingly misleading or otherwise interfering with a police officer or military officer when engaged in their duties	The Indian Evidence Act, 1872
3. Celebratory gunfire which can endanger the personal safety of others	The Arms (Amendment) Act, 2019

How many of the above pairs are correctly matched?

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

ANSWER: (UPSC Set B): (b) Only two

DETAILED EXPLANATION

- **Pair 1** – Correct. The Official Secrets Act, 1923 (Section 6) punishes unauthorised use of uniforms and the falsification of reports.
- **Pair 2** – Incorrect. Misleading or interfering with a police or military officer on duty near a prohibited place is covered by the Official Secrets Act, 1923 (Section 7), not the Indian Evidence Act, 1872 (law of evidence).
- **Pair 3** – Correct. The Arms (Amendment) Act, 2019 penalises celebratory gunfire that endangers life or personal safety (up to two years' imprisonment and/or a fine).

➤ **Two correct** – option (b).

STATIC + CURRENT AFFAIRS LINK

- Static: Official Secrets Act 1923; Arms Act 1959; Indian Evidence Act 1872. Current affairs: Replacement of the Indian Evidence Act with the Bharatiya Sakshya Adhiniyam 2023; the Official Secrets Act debate (Digital India and RTI context).

SOURCES

1. India Code – indiacode.nic.in (Official Secrets Act, Arms Act)
2. Ministry of Home Affairs – mha.gov.in
3. Law Commission of India reports

Question 53 | International Relations / Regions in News

Consider the following pairs:

Region often mentioned in news	Reason for being in news
1. North Kivu and Ituri	War between Armenia and Azerbaijan
2. Nagorno-Karabakh	Insurgency in Mozambique
3. Kherson and Zaporizhzhia	Dispute between Israel and Lebanon

How many of the above pairs are correctly matched?

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

ANSWER: (UPSC Set B): (d) None

DETAILED EXPLANATION

- **Pair 1** – North Kivu and Ituri are provinces of the Democratic Republic of the Congo, in news for armed conflict (M23, ADF).
- **Pair 2** – Nagorno-Karabakh is the territory contested by Armenia and Azerbaijan; the insurgency in Mozambique is in Cabo Delgado.
- **Pair 3** – Kherson and Zaporizhzhia are Ukrainian regions annexed by Russia (claimed in 2022) in the Russia–Ukraine war; the Israel–Lebanon dispute concerns border and maritime areas.

➤ **None is correct** – option (d).

STATIC + CURRENT AFFAIRS LINK

- Static: Map-based IR – conflict zones. Current affairs: Russia–Ukraine war (Feb 2022 onwards); Azerbaijan's September 2023 offensive in Nagorno-Karabakh; DRC–Rwanda tensions; Cabo Delgado insurgency.

SOURCES

1. The Hindu – International section
2. MEA – mea.gov.in
3. UN News – news.un.org

Question 54 | International Relations / West Asia

Consider the following statements:

Statement-I: Israel has established diplomatic relations with some Arab States.
Statement-II: The 'Arab Peace Initiative' mediated by Saudi Arabia was signed by Israel and Arab League.

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 is the correct explanation for Statement-I
(b) Both Statement-I and Statement-II are correct and Statement-II is not the correct explanation for Statement-I
(c) Statement-I is correct but Statement-II is incorrect
(d) Statement-I is incorrect but Statement-II is correct

ANSWER: (UPSC Set B): (c) Statement-I is correct but Statement-II is incorrect
DETAILED EXPLANATION

- **Statement-I** – Correct. Israel has relations with Egypt (1979), Jordan (1994), and, under the Abraham Accords (2020), the UAE, Bahrain, Morocco and Sudan.
- **Statement-II** – Incorrect. The Arab Peace Initiative (2002) was proposed by Saudi Arabia and endorsed by the Arab League; Israel is not a signatory. It offers normalisation in return for withdrawal to 1967 lines and a Palestinian State.

➤ Answer (c).
STATIC + CURRENT AFFAIRS LINK

- Static: West Asia – Camp David, Oslo, Abraham Accords. Current affairs: Saudi–Israel normalisation talks (2023); India–Israel–UAE–US (I2U2); India–Middle East–Europe Corridor; Iran–Saudi restoration of ties (March 2023, China-brokered).

SOURCES
1. MEA – mea.gov.in (India–West Asia)
2. Arab League – Arab Peace Initiative (2002)
3. The Hindu – International

Question 55 | Current Affairs / Sports Awards

Consider the following pairs with regard to sports awards:

Award	For
1. Major Dhyan Chand Khel Ratna Award	For the most spectacular and outstanding performance by a sportsperson over period of last four years
2. Arjuna Award	For the lifetime achievement by sportsperson
3. Dronacharya Award	To honour eminent coaches who have successfully trained sportspersons or teams
4. Rashtriya Khel Protsahan Puraskar	To recognize the contribution made by sportspersons even after their retirement

How many of the above pairs are correctly matched?
(a) Only one
(b) Only two
(c) Only three
(d) All four

ANSWER: (UPSC Set B): (b) Only two
DETAILED EXPLANATION

- **Pair 1** – Correct. The Major Dhyan Chand Khel Ratna (renamed in August 2021 from Rajiv Gandhi Khel Ratna) is India's highest sporting honour for spectacular and most outstanding performance over a four-year period.
- **Pair 2** – Incorrect. The Arjuna Award is for consistent outstanding performance over the previous four years; lifetime achievement is recognised by the Dhyan Chand Award.
- **Pair 3** – Correct. The Dronacharya Award honours eminent coaches who have produced medal-winning sportspersons or teams.
- **Pair 4** – Incorrect. The Rashtriya Khel Protsahan Puraskar recognises corporate entities, sports-promotion bodies and NGOs that encourage sport; it is not for retired sportspersons.

➤ **Two correct** – option (b).
STATIC + CURRENT AFFAIRS LINK

- Static: National Sports Awards structure. Current affairs: National Sports Awards 2022 (Sharath Kamal received the Khel Ratna); Khelo India; Olympic cycle (Tokyo 2020, Paris 2024).

SOURCES

1. Ministry of Youth Affairs and Sports – yas.nic.in (National Sports Awards)
2. Sports Authority of India – sportsauthorityofindia.nic.in
3. PIB press releases (August 2021 renaming)

Question 56 | Current Affairs / Sports – Chess Olympiad

Consider the following statements in respect of the 44th Chess Olympiad, 2022:

1. It was the first time that Chess Olympiad was held in India.
2. The official mascot was named 'Thambi'.
3. The trophy for the winning team in the open section is the Vera Menchik Cup.
4. The trophy for the winning team in the women's section is the Hamilton-Russell Cup.

How many of the statements given above are correct?

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

ANSWER: (UPSC Set B): (b) Only two

DETAILED EXPLANATION

- **Statement 1** – Correct. The 44th Chess Olympiad (28 July–10 August 2022, Mamallapuram, Tamil Nadu) was the first in India.
- **Statement 2** – Correct. The mascot was 'Thambi', a horse in a traditional Tamil veshti and shirt.
- **Statement 3** – Incorrect. The Open section's trophy is the Hamilton-Russell Cup; the Vera Menchik Cup is the women's trophy.
- **Statement 4** – Incorrect, for the same reason (the trophies are reversed).

➤ **Two correct** – option (b). Results: Uzbekistan won the Open section, Ukraine the Women's; India won bronze in both.

STATIC + CURRENT AFFAIRS LINK

- Static: Sports in news – hosting international events. Current affairs: R. Praggnanandhaa runner-up at FIDE World Cup 2023; D. Gukesh's rise (later World Champion, December 2024); India's chess momentum.

SOURCES

1. FIDE – fide.com (Chess Olympiad)
2. All India Chess Federation – aicf.in
3. Government of Tamil Nadu – tn.gov.in (Chess Olympiad 2022)

Question 57 | International Relations / Conflict Zones

Consider the following pairs:

Area of conflict	Country where it is located
1. Donbas	Syria
2. Kachin	Ethiopia
3. Tigray	North Yemen

How many of the above pairs are correctly matched?

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

ANSWER: (UPSC Set B): (d) None

DETAILED EXPLANATION

Donbas is in eastern Ukraine (Donetsk and Luhansk).
Kachin is in northern Myanmar (Kachin Independence Army).
Tigray is in northern Ethiopia (TPLF conflict 2020–22).

➤ **None is correct** – option (d).

STATIC + CURRENT AFFAIRS LINK

- Static: Maps of Europe, Africa and South-East Asia. Current affairs: Russia–Ukraine war; Myanmar after the February 2021 coup; Tigray ceasefire (Pretoria agreement, November 2022).

SOURCES

1. UN OCHA – unocha.org
2. The Hindu – International
3. MEA – mea.gov.in

Question 58 | International Relations / Africa

In the recent years Chad, Guinea, Mali and Sudan caught the international attention for which one of the following reasons common to all of them?

(a) Discovery of rich deposits of rare earth elements
(b) Establishment of Chinese military bases
(c) Southward expansion of Sahara Desert
(d) Successful coups

ANSWER: (UPSC Set B): (d) Successful coups

DETAILED EXPLANATION

- **Option (d)** – Military takeovers in Mali (2020, 2021), Chad (April 2021), Guinea (September 2021) and Sudan (October 2021) were widely reported.
- **Option (a)** – Rare-earth discoveries are not the common feature.
- **Option (b)** – China's only acknowledged overseas military base (as of 2023) is in Djibouti.
- **Option (c)** – Desertification of the Sahel is real but not the common reason for attention.

➤ Burkina Faso (2022) and Niger (July 2023) followed the same trend.

STATIC + CURRENT AFFAIRS LINK

- Static: Africa – Sahel, political geography. Current affairs: Coups in the Sahel; Africa's regional bodies (ECOWAS, AU); African Union becoming a permanent member of the G20 (September 2023); Sudan civil war from April 2023.

SOURCES

1. African Union – au.int
2. The Hindu – International
3. UN News – news.un.org

Question 59 | Environment / Energy – Green Hydrogen

Consider the following heavy industries:

1. Fertilizer plants
2. Oil refineries
3. Steel plants

Green hydrogen is expected to play a significant role in decarbonizing how many of the above industries?

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

ANSWER: (UPSC Set B): (c) All three

DETAILED EXPLANATION

1. **Fertilizer plants** – Ammonia production uses hydrogen from natural gas; green hydrogen can replace it (green ammonia).

2. **Oil refineries** – Hydrogen is used in hydro-treating and hydrocracking; replacing grey hydrogen cuts emissions.
3. **Steel plants** – Hydrogen-based direct reduction of iron (DRI) can replace coking coal.

➤ **All three** – option (c).

STATIC + CURRENT AFFAIRS LINK

- Static: Hydrogen colour code; electrolysis; hard-to-abate sectors. Current affairs: National Green Hydrogen Mission (January 2023; ₹19,744 crore; 5 MMT annual production by 2030); SIGHT programme; green ammonia auctions.

SOURCES

1. Ministry of New and Renewable Energy – mnre.gov.in (National Green Hydrogen Mission)
2. PIB – pib.gov.in
3. IEA – iea.org (Hydrogen)

Question 60 | International Relations / G-20

Consider the following statements about G-20:

1. The G-20 group was originally established as a platform for the Finance Ministers and Central Bank Governors to discuss the international economic and financial issues.
2. Digital public infrastructure is one of India's G-20 priorities.

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

ANSWER: (UPSC Set B): (c) Both 1 and 2

DETAILED EXPLANATION

- **Statement 1** – Correct. The G-20 was formed in 1999 after the Asian financial crisis as a forum of finance ministers and central bank governors; leaders' summits began in 2008.
- **Statement 2** – Correct. Digital public infrastructure (DPI) was among India's priorities during its G-20 Presidency (December 2022–November 2023).

➤ **Both correct** – option (c).

STATIC + CURRENT AFFAIRS LINK

- Static: Global economic governance – IMF, World Bank, G-20. Current affairs: India's G-20 Presidency, theme 'Vasudhaiva Kutumbakam'; New Delhi Leaders' Declaration (September 2023); African Union admitted as a permanent member; Global Digital Public Infrastructure Repository.

SOURCES

1. G20 India – g20.org
2. MEA – mea.gov.in
3. Ministry of Electronics and IT – meity.gov.in (DPI)

Question 61 | Modern History / Archaeology & Historiography

With reference to the Indian History, Alexander Rea, A. H. Longhurst, Robert Sewell, James Burgess and Walter Elliot were associated with

(a) archaeological excavations
(b) establishment of English Press in Colonial India
(c) establishment of Churches in Princely States
(d) construction of railways in Colonial India

ANSWER: (UPSC Set B): (a) archaeological excavations

DETAILED EXPLANATION

- **Option (a)** – All five were colonial-era scholar-officials of the archaeological and antiquarian survey. Alexander Rea (Madras Circle, ASI) excavated Adichanallur and Amaravati; A.H. Longhurst conserved Hampi and Nagarjunakonda; Robert Sewell wrote 'A Forgotten Empire' (Vijayanagara) and listed South

Indian antiquities; James Burgess was Director-General of the ASI and surveyed western India; Walter Elliot (Madras Civil Service) collected inscriptions, coins and sculptures.

Options (b), (c), (d) – None of them is known for the press, church-building or railways.

STATIC + CURRENT AFFAIRS LINK

- Static: Colonial archaeology – Asiatic Society (1784), ASI (1861, Alexander Cunningham), Marshall and Indus Valley discovery (1921–22). Current affairs: Keeladi and Adichanallur excavations; Sanauli chariot burials (ASI, 2018); Ancient Monuments and Archaeological Sites and Remains Act 1958 and the debate on protecting monuments.

SOURCES

1. Bipan Chandra – History of Modern India (Colonial historiography)
2. Archaeological Survey of India – asi.nic.in
3. Upinder Singh – A History of Ancient and Early Medieval India

Question 62 | Ancient History / Art & Architecture

Consider the following pairs:

Site	Well known for
1. Besnagar	Shaivite cave shrine
2. Bhaja	Buddhist cave shrine
3. Sittanavasal	Jain cave shrine

How many of the above pairs are correctly matched?

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

ANSWER: (UPSC Set B): (b) Only two

DETAILED EXPLANATION

1. **Pair 1** – Besnagar (Vidisha, Madhya Pradesh) is known for the Heliodorus Pillar (c. 113 BCE), a Garuda pillar dedicated to Vasudeva – a Vaishnava, not Shaivite cave shrine.
2. **Pair 2** – Bhaja (Maharashtra) has early Buddhist rock-cut chaityas and viharas (2nd century BCE).
3. **Pair 3** – Sittanavasal (Pudukkottai, Tamil Nadu) has a Jain cave shrine with Pandya-era paintings.

➤ **Two correct** – option (b).

STATIC + CURRENT AFFAIRS LINK

- Static: Rock-cut architecture – Barabar, Karle, Ajanta, Ellora; Jain art. Current affairs: Ajanta–Ellora tourism; UNESCO tentative list entries; ASI's conservation of Sittanavasal frescoes.

SOURCES

1. NCERT Class 11 – An Introduction to Indian Art, Part I
2. Nitin Singhania – Indian Art and Culture
3. ASI – asi.nic.in

Question 63 | Modern History / Freedom Struggle

Consider the following statements:

Statement-I: 7th August is declared as the National Handloom Day.

Statement-II: It was in 1905 that the Swadeshi Movement was launched on the same day.

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 is the correct explanation for Statement-I**
(b) Both Statement-I and Statement-II are correct and Statement-II is not the correct explanation for Statement-I
(c) Statement-I is correct but Statement-II is incorrect
(d) Statement-I is incorrect but Statement-II is correct

ANSWER: (UPSC Set B): (a) Both Statement-I and Statement-II are correct and Statement-II is the correct explanation for Statement-I

DETAILED EXPLANATION

- **Statement-I** – Correct. The Government of India declared 7 August as National Handloom Day in 2015; the first was observed in 2015 at Chennai.
- **Statement-II** – Correct. On 7 August 1905, at a meeting in Calcutta Town Hall, the boycott of British goods and the Swadeshi resolution against the partition of Bengal were adopted.
- **Link** – The date was chosen to commemorate the Swadeshi Movement, which promoted indigenous handloom products, so Statement-II explains Statement-I.

➤ Answer (a).

STATIC + CURRENT AFFAIRS LINK

- Static: Partition of Bengal 1905; Swadeshi and Boycott; Khadi and handlooms. Current affairs: National Handloom Day observed every year; Handloom Mark; 'Vocal for Local'; Samarth and National Handloom Development Programme; Geographical Indications of handloom products.

SOURCES

1. Bipan Chandra – India's Struggle for Independence
2. Ministry of Textiles – texmin.nic.in
3. PIB – pib.gov.in (National Handloom Day)

Question 64 | Polity / National Symbols

Consider the following statements in respect of the National Flag of India according to the Flag Code of India, 2002:

Statement-I: One of the standard sizes the National Flag of India of 600 mm × 400 mm.

Statement-II: The ratio of the length to the height (width) of the Flag shall be 3:2.

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 is the correct explanation for Statement-I

(b) Both Statement-I and Statement-II are correct and Statement-II is not the correct explanation for Statement-I

(c) Statement-I is correct but Statement-II is incorrect

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

ANSWER: (UPSC Set B): (d) Statement-I is incorrect but Statement-II is correct

DETAILED EXPLANATION

Statement-I – Incorrect. The Flag Code lists nine standard sizes: 6300×4200, 3600×2400, 2700×1800, 1800×1200, 1350×900, 900×600, 450×300, 225×150 and 150×100 mm. 600×400 mm is not among them.

Statement-II – Correct. The ratio of length to height is 3:2, as per the Flag Code (and the Bureau of Indian Standards specification).

➤ Answer (d). Remember that all sizes follow the 3:2 ratio.

STATIC + CURRENT AFFAIRS LINK

- Static: Flag Code of India 2002; Prevention of Insults to National Honour Act 1971; Article 51A. Current affairs: Flag Code amendments (December 2021 allowing machine-made and polyester flags; July 2022 allowing day-and-night display); Har Ghar Tiranga campaign (August 2022).

SOURCES

1. Ministry of Home Affairs – mha.gov.in (Flag Code of India 2002)
2. Bureau of Indian Standards – bis.gov.in
3. PIB – Har Ghar Tiranga

Question 65 | Polity / Constitution Making

Consider the following statements in respect of the Constitution Day:

Statement-I: The Constitution Day is celebrated on 26th November every year to promote constitutional values among citizens.

Statement-II: On 26th November, 1949, the Constituent Assembly of India set up a Drafting Committee under the Chairmanship of Dr. B.R. Ambedkar to prepare a Draft Constitution of India.

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 is the correct explanation for Statement-I

(b) Both Statement-I and Statement-II are correct and Statement-II is not the correct explanation for Statement-I

(c) Statement-I is correct but Statement-II is incorrect

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

ANSWER: (UPSC Set B): (c) Statement-I is correct but Statement-II is incorrect

DETAILED EXPLANATION

- **Statement-I** – Correct. Constitution Day (Samvidhan Divas) has been observed on 26 November since 2015 (the 125th birth anniversary year of Dr. Ambedkar) to promote constitutional values.
- **Statement-II** – Incorrect. On 26 November 1949 the Constituent Assembly adopted and signed the Constitution. The Drafting Committee under Dr. Ambedkar was set up on 29 August 1947.

➤ Answer (c).

STATIC + CURRENT AFFAIRS LINK

- Static: Constituent Assembly – Objectives Resolution (13 Dec 1946), committees, adoption (26 Nov 1949) and commencement (26 Jan 1950). Current affairs: Samvidhan Divas observances and reading of the Preamble; 75 years of the Constitution (2024–25).

SOURCES

1. M. Laxmikanth – Indian Polity, Ch. 1–2
2. Constituent Assembly Debates – loksabha.nic.in
3. Ministry of Law and Justice – lawmin.gov.in

Question 66 | Economy / World Economy – Gold

Consider the following statements:

Statement-I: Switzerland is one of the leading exporters of gold in terms of value.

Statement-II: Switzerland has the second largest gold reserves in the world.

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 is the correct explanation for Statement-I

(b) Both Statement-I and Statement-II are correct and Statement-II is not the correct explanation for Statement-I

(c) Statement-I is correct but Statement-II is incorrect

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

ANSWER: (UPSC Set B): (c) Statement-I is correct but Statement-II is incorrect

DETAILED EXPLANATION

- **Statement-I** – Correct. Switzerland's refineries and trading hubs make it one of the world's top gold exporters by value (alongside the UK, Hong Kong, UAE and others).
- **Statement-II** – Incorrect. The USA holds the largest official gold reserves (about 8,100 tonnes), then Germany, Italy, France and Russia; Switzerland holds roughly 1,040 tonnes and ranks around seventh.

➤ Answer (c).

STATIC + CURRENT AFFAIRS LINK

- Static: Gold reserves and trade; refining hubs. Current affairs: India's gold imports and Current Account Deficit; India–EFTA Trade and Economic Partnership Agreement (signed March 2024); central banks' record gold buying in 2022–23.

SOURCES

1. World Gold Council – gold.org (Central bank gold reserves)
2. IMF – imf.org (International Financial Statistics)
3. Economic Survey 2022–23

Question 67 | International Relations / Trade & Technology

Consider the following statements:

Statement-I: Recently, the United States of America (USA) and the European Union (EU) have launched the 'Trade and Technology Council'.
Statement-II: The USA and the EU claim that through this they are trying to bring technological progress and physical productivity under their control.
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 is the correct explanation for Statement-I
(b) Both Statement-I and Statement-II are correct and Statement-II is not the correct explanation for Statement-I
(c) Statement-I is correct but Statement-II is incorrect
(d) Statement-I is incorrect but Statement-II is correct

ANSWER: (UPSC Set B): (c) Statement-I is correct but Statement-II is incorrect
DETAILED EXPLANATION
- **Statement-I** – Correct. The US–EU Trade and Technology Council (TTC) was launched in June 2021 and held its first meeting in Pittsburgh in September 2021.
- **Statement-II** – Incorrect. The stated aim is to coordinate approaches on trade, technology standards, supply chains, AI, semiconductors and climate-friendly technology and to counter non-market practices; it does not claim to 'control' technological progress or physical productivity.

➤ Answer (c).
STATIC + CURRENT AFFAIRS LINK
Static: Plurilateral technology groupings. Current affairs: India–EU Trade and Technology Council (launched February 2023, first meeting in Brussels, May 2023); India–US iCET (January 2023); Semiconductor Mission.
SOURCES
1. European Commission – commission.europa.eu (EU–US TTC)
2. MEA – mea.gov.in
3. PIB – pib.gov.in (India–EU TTC)

Question 68 | Economy / External Sector

Consider the following statements:
Statement-I: India accounts for 3.2% of global export of goods.
Statement-II: Many local companies and some foreign companies operating in India have taken advantage of India's 'Production-linked Incentive' scheme.
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 is the correct explanation for Statement-I
(b) Both Statement-I and Statement-II are correct and Statement-II is not the correct explanation for Statement-I
(c) Statement-I is correct but Statement-II is incorrect
(d) Statement-I is incorrect but Statement-II is correct

ANSWER: (UPSC Set B): (d) Statement-I is incorrect but Statement-II is correct
DETAILED EXPLANATION
- **Statement-I** – Incorrect. India's share of world merchandise exports is about 1.8% (WTO data, 2022); the figure is higher for services (about 4%).
- **Statement-II** – Correct. The PLI schemes (launched 2020 across 14 sectors with an outlay of about ₹1.97 lakh crore) have attracted Indian and foreign firms, for example in mobile phones, pharmaceuticals, electronics and auto components.

➤ Answer (d).
STATIC + CURRENT AFFAIRS LINK
Static: Foreign trade; Make in India; Atmanirbhar Bharat. Current affairs: India's merchandise exports (about $447 billion in 2022–23); Foreign Trade Policy 2023; Rupee trade settlement; PLI results in mobile phones and Apple suppliers.
SOURCES
1. WTO – World Trade Statistical Review (wto.org)

2. DPIIT – dpiit.gov.in (PLI)
3. Economic Survey 2022–23

Question 69 | International Organisations / EU

Consider the following statements: The 'Stability and Growth Pact' of the European Union is a treaty that

1. limits the levels of the budgetary deficit of the countries of the European Union
2. makes the countries of the European Union to share their infrastructure facilities
3. enables the countries of the European Union to share their technologies

How many of the above statements are correct?

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

ANSWER: (UPSC Set B): (a) Only one

DETAILED EXPLANATION

- **Statement 1** – Correct. The Stability and Growth Pact (1997) sets fiscal rules: budget deficit up to 3% of GDP and public debt up to 60% of GDP (the Maastricht criteria).
- **Statement 2** – Incorrect. The Pact is about fiscal discipline, not sharing infrastructure.
- **Statement 3** – Incorrect. Technology sharing is covered by other EU policies (Horizon, single market), not the Pact.

➤ **Only one** – option (a).

STATIC + CURRENT AFFAIRS LINK

- Static: EU institutions; Eurozone; Maastricht Treaty (1992). Current affairs: Suspension of fiscal rules during COVID-19 and the Ukraine war; EU reform of fiscal rules (2023–24); Eurozone inflation and ECB rate hikes.

SOURCES

1. European Commission – economy-finance.ec.europa.eu
2. Council of the EU – consilium.europa.eu
3. The Hindu – International

Question 70 | International Relations / Migration

Consider the following statements:

1. Recently, all the countries of the United Nations have adopted the first-ever compact for international migration, the 'Global Compact for Safe, Orderly and Regular Migration (GCM)'.
2. The objectives and commitments stated in the GCM are binding on the UN member countries.
3. The GCM addresses internal migration or internally displaced people also in its objectives and commitments.

How many of the above statements are correct?

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

ANSWER: (UPSC Set B): (d) None

DETAILED EXPLANATION

- **Statement 1** – Incorrect. The GCM was endorsed at Marrakech in December 2018 and adopted by the UN General Assembly with 152 votes in favour, 5 against (including the USA, Hungary, Israel, Czechia and Poland) and 12 abstentions; not all UN members adopted it.
- **Statement 2** – Incorrect. It is a non-binding, cooperative framework.
- **Statement 3** – Incorrect. It covers international migration only; internal migration and internal displacement are outside its scope.

➤ **None is correct** – option (d).

STATIC + CURRENT AFFAIRS LINK

- Static: Migration governance; refugees vs migrants; 1951 Refugee Convention. Current affairs: India's position on migration and refugee law; International Migration Review Forum (May 2022); Mediterranean migrant crisis.

SOURCES

1. UN – un.org/migration (Global Compact for Migration)
2. IOM – iom.int
3. MEA – mea.gov.in

Question 71 | Geography / World Map – Europe

Consider the following countries:

1. Bulgaria
2. Czech Republic
3. Hungary
4. Latvia
5. Lithuania
6. Romania

How many of the above-mentioned countries share a land border with Ukraine?

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

ANSWER: (UPSC Set B): (a) Only two

DETAILED EXPLANATION

- Hungary and Romania share land borders with Ukraine.
- Bulgaria, Czech Republic, Latvia and Lithuania do not border Ukraine.

➤ **Ukraine's neighbours**: Belarus, Russia, Poland, Slovakia, Hungary, Romania and Moldova. Only two of those named – option (a).

STATIC + CURRENT AFFAIRS LINK

- Static: Map of Europe; Black Sea region. Current affairs: Russia–Ukraine war; Operation Ganga (2022) – Indians evacuated via Romania, Hungary, Poland, Slovakia and Moldova; grain corridor and Black Sea.

SOURCES

1. MEA – mea.gov.in (Operation Ganga)
2. Atlas of the World – Oxford/Orient Blackswan
3. The Hindu – International

Question 72 | Geography / Atmosphere

With reference to the Earth's atmosphere, which one of the following statements is correct?

(a) The total amount of insolation received at the equator is roughly about 10 times of that received at the poles.
(b) Infrared rays constitute roughly two-thirds of insolation.
(c) Infrared waves are largely absorbed by water vapour that is concentrated in the lower atmosphere.
(d) Infrared waves are a part of visible spectrum of electromagnetic waves of solar radiation.

ANSWER: (UPSC Set B): (c) Infrared waves are largely absorbed by water vapour that is concentrated in the lower atmosphere.

DETAILED EXPLANATION

- **Option (a)** – The equator gets roughly two to three times the annual insolation of the poles, not ten times.
- **Option (b)** – Insolation is about 49% infrared, 44% visible light and 7% ultraviolet – roughly half, not two-thirds, is infrared.
- **Option (c)** – Water vapour (and CO_2) absorbs infrared radiation; water vapour is concentrated in the lower troposphere, which is why the lower atmosphere is warmed mainly by terrestrial (infrared) radiation.

- **Option (d)** – Infrared lies beyond the red end of the visible spectrum; it is invisible.

STATIC + CURRENT AFFAIRS LINK

- Static: Heat budget; greenhouse effect; insolation. Current affairs: IPCC AR6 Synthesis Report (March 2023); El Niño and record global temperatures in 2023.

SOURCES

1. NCERT Class 11 – Fundamentals of Physical Geography, Ch. 8 (Solar Radiation, Heat Balance)
2. IPCC – ipcc.ch
3. Certificate Physical and Human Geography – G.C. Leong

Question 73 | Geography / Soils & Biomes

Consider the following statements:

Statement-I: The soil in tropical rain forests is rich in nutrients.

Statement-II: The high temperature and moisture of tropical rain forests cause dead organic matter in the soil to decompose quickly.

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 is the correct explanation for Statement-I

(b) Both Statement-I and Statement-II are correct and Statement-II is not the correct explanation for Statement-I

(c) Statement-I is correct but Statement-II is incorrect

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

ANSWER: (UPSC Set B): (d) Statement-I is incorrect but Statement-II is correct

DETAILED EXPLANATION

- **Statement-I** – Incorrect. Rain-forest soils are generally nutrient-poor (laterite, heavily leached); most nutrients are held in the living biomass.
- **Statement-II** – Correct. Warmth and moisture speed up decomposition; nutrients are quickly absorbed by roots and mycorrhizae or leached away, so little humus accumulates.

➤ Answer (d).

STATIC + CURRENT AFFAIRS LINK

- Static: Nutrient cycling; laterite soils; shifting cultivation. Current affairs: Amazon deforestation; Brazil's Amazon Summit (August 2023); India's 'jhum' cultivation in the North-East.

SOURCES

1. NCERT Class 11 – Fundamentals of Physical Geography (Soils)
2. NCERT Class 12 Biology – Ecosystem
3. Shankar IAS – Environment

Question 74 | Geography / Climatology

Consider the following statements:

Statement-I: The temperature contrast between continents and oceans is greater during summer than in winter.

Statement-II: The specific heat of water is more than that of land surface.

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 is the correct explanation for Statement-I

(b) Both Statement-I and Statement-II are correct and Statement-II is not the correct explanation for Statement-I

(c) Statement-I is correct but Statement-II is incorrect

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

ANSWER: (UPSC Set B): (d) Statement-I is incorrect but Statement-II is correct

DETAILED EXPLANATION

- **Statement-I** – Incorrect. The continent–ocean temperature contrast is greater in winter, when continental interiors (for example Siberia) cool rapidly while oceans retain heat.

- **Statement-II** – Correct. Water has a much higher specific heat than land, so it heats and cools slowly. (Land: low specific heat; water ≈ 4.2 kJ/kg·K.)

➤ Answer (d).

STATIC + CURRENT AFFAIRS LINK

Static: Land–sea breeze; continentality; monsoon mechanism. Current affairs: Indian monsoon 2023 and El Niño; marine heatwaves.

SOURCES

1. NCERT Class 11 – Fundamentals of Physical Geography (Heating and Cooling of Atmosphere)
2. IMD – mausam.imd.gov.in
3. G.C. Leong – Certificate Physical and Human Geography

Question 75 | Geography / Geomorphology – Earthquake Waves

Consider the following statements:

1. In a seismograph, P waves are recorded earlier than S waves.
2. In P waves, the individual particles vibrate to and fro in the direction of wave propagation whereas in S waves, the particles vibrate up and down at right angles to the direction of wave propagation.

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

ANSWER: (UPSC Set B): (c) Both 1 and 2

DETAILED EXPLANATION

- **Statement 1** – Correct. P waves (primary) travel fastest and arrive first.
- **Statement 2** – Correct. P waves are longitudinal (particles move along the direction of travel – push-pull); S waves are transverse (particles move at right angles). S waves cannot travel through liquids.

➤ **Both correct** – option (c).

STATIC + CURRENT AFFAIRS LINK

Static: Seismic waves and the Earth's interior; shadow zones. Current affairs: Turkey–Syria earthquake (February 2023); Nepal earthquakes and Delhi tremors; National Centre for Seismology.

SOURCES

1. NCERT Class 11 – Fundamentals of Physical Geography, Ch. 3 (Interior of the Earth)
2. National Centre for Seismology – seismo.gov.in
3. USGS – usgs.gov

Question 76 | Geography / Energy – Thermal Power

With reference to coal-based thermal power plants in India, consider the following statements:

1. None of them uses seawater.
2. None of them is set up in water-stressed district.
3. None of them is privately owned.

How many of the above statements are correct?

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

ANSWER: (UPSC Set B): (d) None

DETAILED EXPLANATION

Statement 1 – Incorrect. Some coastal plants use seawater for cooling (for example Mundra in Gujarat).
Statement 2 – Incorrect. Several plants operate in water-stressed districts (studies by WRI and CSE found a large share of thermal capacity in water-stressed areas, for example in Maharashtra, Telangana and Karnataka).
Statement 3 – Incorrect. Many plants are privately owned (Adani, Tata Power, JSW, Torrent, etc.).

➤ **None is correct** – option (d).

STATIC + CURRENT AFFAIRS LINK

Static: Energy mix; water–energy nexus. Current affairs: MoEFCC water-consumption norms for thermal plants (2015) and revised FGD timelines; coal dependence (about 70% of electricity); Energy transition and JETP discussions.

SOURCES

1. Central Electricity Authority – cea.nic.in
2. Ministry of Power – powermin.gov.in
3. CSE – cseindia.org (Water use in power plants)

Question 77 | Science & Technology / Biotechnology

'Wolbachia method' is sometimes talked about with reference to which one of the following?

(a) Controlling the viral diseases spread by mosquitoes
(b) Converting crop residues into packing material
(c) Producing biodegradable plastics
(d) Producing biochar from thermo-chemical conversion of biomass

ANSWER: (UPSC Set B): (a) Controlling the viral diseases spread by mosquitoes

DETAILED EXPLANATION

- **Option (a)** – Wolbachia is a common bacterium; when introduced into Aedes aegypti mosquitoes it reduces their ability to transmit dengue, Zika, chikungunya and yellow fever, or lowers their reproduction.
- **Options (b), (c), (d)** – Packing materials from residues (mycelium), bioplastics (PHA, PLA) and biochar (pyrolysis) are unrelated.

STATIC + CURRENT AFFAIRS LINK

Static: Vector-borne disease control; biological control. Current affairs: World Mosquito Program; Wolbachia releases in Indonesia (Yogyakarta), Brazil and Colombia; dengue outbreaks in India in 2023.

SOURCES

1. World Mosquito Program – worldmosquitoprogram.org
2. ICMR – icmr.gov.in
3. WHO – who.int (Dengue)

Question 78 | Environment / Climate Mitigation

Consider the following activities:

1. Spreading finely ground basalt rock on farmlands extensively
2. Increasing the alkalinity of oceans by adding lime
3. Capturing carbon dioxide released by various industries and pumping it into abandoned subterranean mines in the form of carbonated waters

How many of the above activities are often considered and discussed for carbon capture and sequestration?

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

ANSWER: (UPSC Set B): (c) All three

DETAILED EXPLANATION

1. **Enhanced rock weathering** – Basalt dust reacts with CO_2 to form bicarbonate, locking carbon away.
2. **Ocean alkalinity enhancement** – Adding lime or other alkaline minerals raises ocean pH and increases CO_2 uptake.
3. **Carbon mineralisation/geological storage** – Injecting CO_2 dissolved in water into basalt formations or abandoned mines converts it to stable carbonate minerals (for example CarbFix).

➤ **All three** – option (c).

STATIC + CURRENT AFFAIRS LINK

- Static: Carbon sinks; CCUS; geoengineering. Current affairs: IPCC AR6 on carbon dioxide removal; India's net-zero by 2070; Mission LiFE; carbon markets under Article 6; NITI Aayog CCUS roadmap.

SOURCES

1. IPCC AR6 WG III – ipcc.ch
2. NITI Aayog – niti.gov.in (CCUS)
3. Shankar IAS – Environment

Question 79 | Science & Technology / Biotechnology

'Aerial metagenomics' best refers to which one of the following situations?

(a) Collecting DNA samples from air in a habitat at one go
(b) Understanding the genetic makeup of avian species of a habitat
(c) Using air-borne devices to collect blood samples from moving animals
(d) Sending drones to inaccessible areas to collect plant and animal samples from land surfaces and water bodies

ANSWER: (UPSC Set B): (a) Collecting DNA samples from air in a habitat at one go

DETAILED EXPLANATION

- **Option (a)** – Airborne environmental DNA (eDNA) is collected from air filters and sequenced to identify the species present in a habitat – 'metagenomics' of the air.
- **Option (b)** – Avian genomics studies birds only.
- **Options (c), (d)** – These involve physical sampling by devices or drones, not collecting DNA from the air.

STATIC + CURRENT AFFAIRS LINK

- Static: Metagenomics; eDNA; biodiversity monitoring. Current affairs: Studies using airborne **eDNA** at zoos and forests (2023); biodiversity monitoring and the Biological Diversity (Amendment) Act 2023.

SOURCES

1. Nature / Current Biology – airborne eDNA studies (2023)
2. DBT – dbtindia.gov.in
3. Shankar IAS – Science and Technology

Question 80 | Science & Technology / Genetics

'Microsatellite DNA' is used in the case of which one of the following?

(a) Studying the evolutionary relationships among various species of fauna
(b) Stimulating 'stem cells' to transform into diverse functional tissues
(c) Promoting clonal propagation of horticultural plants
(d) Assessing the efficacy of drugs by conducting series of drug trials in a population

ANSWER: (UPSC Set B): (a) Studying the evolutionary relationships among various species of fauna

DETAILED EXPLANATION

- **Option (a)** – Microsatellites (short tandem repeats) are highly variable markers used in population genetics, species identification, evolutionary relationships and wildlife forensics (for example tiger population studies).
- **Option (b)** – Stem-cell differentiation uses growth factors/reprogramming, not microsatellites.
- **Option (c)** – Clonal propagation uses tissue culture.
- **Option (d)** – Drug trials are clinical research.

STATIC + CURRENT AFFAIRS LINK

- Static: DNA fingerprinting; molecular markers. Current affairs: Genetic mapping of tigers and Asiatic lions; Wildlife forensics at the Wildlife Institute of India; Cheetah introduction genetics.

SOURCES

1. NCERT Class 12 Biology – Molecular Basis of Inheritance (DNA fingerprinting)
2. Wildlife Institute of India – wii.gov.in
3. Shankar IAS – Science and Technology

Question 81 | Social Issues / Health – JSY

Consider the following statements in relation to Janani Suraksha Yojana:
1. It is a safe motherhood intervention of the State Health Departments.
2. Its objective is to reduce maternal and neonatal mortality among poor pregnant women.
3. It aims to promote institutional delivery among poor pregnant women.
4. Its objective includes providing public health facilities to sick infants up to one year of age.

How many of the statements given above are correct?
(a) Only one
(b) Only two
(c) Only three
(d) All four

ANSWER: (UPSC Set B): (b) Only two
DETAILED EXPLANATION

- **Statement 1** – Incorrect as framed. JSY is a 100% centrally sponsored safe-motherhood intervention under the National Health Mission (earlier NRHM), implemented through States; it is not an intervention 'of the State Health Departments'.
- **Statement 2** – Correct. The objective is to reduce maternal and neonatal mortality.
- **Statement 3** – Correct. It promotes institutional deliveries among poor pregnant women through cash incentives (and ASHA linkage).
- **Statement 4** – Incorrect. Free care for sick newborns/infants up to one year is under the Janani Shishu Suraksha Karyakram (JSSK, 2011), not JSY.

➤ **Two correct** – option (b).

STATIC + CURRENT AFFAIRS LINK

- Static: NHM – RCH, ASHA, JSY, JSSK; MMR and IMR indicators. Current affairs: SRS data showing MMR decline to 97 per lakh live births (2018–20); Pradhan Mantri Surakshit Matritva Abhiyan; institutional delivery above 88% in NFHS-5.

SOURCES
1. National Health Mission – nhm.gov.in (JSY)
2. NFHS-5 – rchiips.org
3. Ministry of Health and Family Welfare – mohfw.gov.in

Question 82 | Social Issues / Health – Anaemia Mukt Bharat

Consider the following statements in the context of interventions being undertaken under Anaemia Mukt Bharat Strategy:
1. It provides prophylactic calcium supplementation for pre-school children, adolescents and pregnant women.
2. It runs a campaign for delayed cord clamping at the time of child-birth.
3. It provides for periodic deworming to children and adolescents.
4. It addresses non-nutritional causes of anaemia in endemic pockets with special focus on malaria, hemoglobinopathies and fluorosis.

How many of the statements given above are correct?
(a) Only one
(b) Only two
(c) Only three
(d) All four

ANSWER: (UPSC Set B): (c) Only three
DETAILED EXPLANATION

- **Statement 1** – Incorrect. AMB provides prophylactic iron and folic acid (IFA) supplementation, not calcium.
- **Statement 2** – Correct. Delayed cord clamping (at least 3 minutes) is promoted to improve newborn iron stores.
- **Statement 3** – Correct. Biannual deworming (albendazole) for children and adolescents.

- **Statement 4** – Correct. AMB targets non-nutritional causes such as malaria, haemoglobinopathies and fluorosis in endemic areas.

➤ **Three correct** – option (c). AMB's '6x6x6' strategy: six beneficiary groups, six interventions, six institutional mechanisms.

STATIC + CURRENT AFFAIRS LINK

- Static: Nutritional deficiency diseases; POSHAN Abhiyaan; Anaemia in India. Current affairs: NFHS-5 shows anaemia prevalence rose (women 15–49 about 57%); Poshan Abhiyaan; fortified rice distribution plan (rolled out by 2024).

SOURCES

1. Ministry of Health and Family Welfare – anemiamuktbharat.info
2. NFHS-5 (2019–21) – rchiips.org
3. POSHAN Abhiyaan – poshanabhiyaan.gov.in

Question 83 | Science & Technology / Materials

Consider the following statements:

1. Carbon fibres are used in the manufacture of components used in automobiles and aircraft.
2. Carbon fibres once used cannot be recycled.

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

ANSWER: (UPSC Set B): (a) 1 only

DETAILED EXPLANATION

- **Statement 1** – Correct. Carbon-fibre-reinforced polymers are light and strong, so they are used in aircraft structures, F1 and electric cars, wind-turbine blades and sports equipment.
- **Statement 2** – Incorrect. Carbon fibres can be recycled (by pyrolysis, solvolysis, or mechanical processes), though the quality may fall.

➤ **Only statement 1** – option (a).

STATIC + CURRENT AFFAIRS LINK

- Static: Composite materials; advanced materials. Current affairs: Aerospace and EV light-weighting; Hydrogen storage tanks wound with carbon fibre; Make in India in defence aerospace; carbon-fibre composites for Gaganyaan/launch vehicles.

SOURCES

1. NCERT Class 12 Chemistry – Polymers
2. ISRO – isro.gov.in
3. Shankar IAS – Science and Technology

Question 84 | Science & Technology / Electronics

Consider the following actions:

1. Detection of car crash/collision which results in the deployment of airbags almost instantaneously.
2. Detection of accidental free fall of a laptop towards the ground which results in the immediate turning off of the hard drive
3. Detection of the tilt of smartphone which results in the rotation of display between portrait and landscape mode

In how many of the above actions is the function of accelerometer required?

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

ANSWER: (UPSC Set B): (c) All three

DETAILED EXPLANATION

- **Action 1** – Crash detection: an accelerometer measures sudden deceleration and triggers the airbag.
- **Action 2** – Free-fall detection: the accelerometer senses the near-zero acceleration of free fall and parks the hard-drive heads.
- **Action 3** – Screen rotation: the accelerometer senses the direction of gravity relative to the phone.

➤ **All three** – option (c).

STATIC + CURRENT AFFAIRS LINK

- Static: MEMS sensors; gyroscope vs accelerometer. Current affairs: Smartphone and wearables sensors; semiconductor and MEMS push in India's Semiconductor Mission.

SOURCES

1. NCERT Class 11/12 Physics – Motion and Semiconductor devices
2. ISRO – isro.gov.in (inertial sensors)
3. Shankar IAS – Science and Technology

Question 85 | Science & Technology / Aquaculture

With reference to the role of biofilters in Recirculating Aquaculture System, consider the following statements:

1. Biofilters provide waste treatment by removing uneaten fish feed.
2. Biofilters convert ammonia present in fish waste to nitrate.
3. Biofilters increase phosphorus as nutrient for fish in water.

How many of the statements given above are correct?

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

ANSWER: (UPSC Set B): (b) Only two

DETAILED EXPLANATION

- **Statement 1** – Accepted as correct by the key. Biofilters are the waste-treatment unit of the recirculating system; they work with the solids-removal stage to clear uneaten feed and organic waste so water can be reused.
- **Statement 2** – Correct. Nitrifying bacteria (Nitrosomonas, Nitrobacter) oxidise toxic ammonia to nitrite and then to the much less toxic nitrate.
- **Statement 3** – Incorrect. Biofilters do not add phosphorus; well-managed systems reduce nutrient loads.

➤ **Two correct** – option (b). (Strictly, mechanical filters remove solids and biofilters process dissolved wastes; the key treats statement 1 as acceptable.)

STATIC + CURRENT AFFAIRS LINK

- Static: Blue Revolution; aquaculture; nitrogen cycle. Current affairs: Pradhan Mantri Matsya Sampada Yojana (2020); Biofloc and RAS promotion; India among top fish producers.

SOURCES

1. Department of Fisheries – dof.gov.in
2. ICAR-CIFA – cifa.nic.in
3. FAO – fao.org (Recirculating aquaculture systems)

Question 86 | Science & Technology / Space

Consider the following pairs:

Objects in space	Description
1. Cepheids	Giant clouds of dust and gas in space
2. Nebulae	Stars which brighten and dim periodically
3. Pulsars	Neutron stars that are formed when massive stars run out of fuel and collapse

How many of the above pairs are correctly matched?

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

ANSWER: (UPSC Set B): (a) Only one
DETAILED EXPLANATION

- **Pair 1** – Cepheids are pulsating variable stars that brighten and dim periodically (used as 'standard candles').
- **Pair 2** – Nebulae are giant clouds of dust and gas; the descriptions of pairs 1 and 2 have been interchanged.
- **Pair 3** – Pulsars are rapidly rotating, highly magnetised neutron stars, formed from the collapse of massive stars after supernova explosions, emitting beams of radiation.

➤ **Only one** – option (a).
STATIC + CURRENT AFFAIRS LINK

- Static: Stellar evolution; supernovae; neutron stars. Current affairs: James Webb Space Telescope images; Aditya-L1 solar mission (launched September 2023); India's AstroSat; Chandrayaan-3 (August 2023).

SOURCES
1. NCERT Class 11 – Fundamentals of Physical Geography, Ch. 2 (Origin and Evolution of the Earth)
2. ISRO – isro.gov.in
3. NASA – nasa.gov

Question 87 | Science & Technology / Space – Navigation

Which one of the following countries has its own Satellite Navigation System?
(a) Australia
(b) Canada
(c) Israel
(d) Japan

ANSWER: (UPSC Set B): (d) Japan
DETAILED EXPLANATION

- **Option (d)** – Japan operates the Quasi-Zenith Satellite System (QZSS), a regional navigation system.
- **Options (a), (b), (c)** – Australia, Canada and Israel rely on GPS and other systems; they have no independent navigation constellation.

➤ **Global systems**: GPS (USA), GLONASS (Russia), Galileo (EU), BeiDou (China). Regional: NavIC (India), QZSS (Japan).
STATIC + CURRENT AFFAIRS LINK

- Static: GNSS; NavIC (IRNSS); GAGAN. Current affairs: Launch of NVS-01, the first second-generation NavIC satellite (GSLV-F12, 29 May 2023); NavIC use in smartphones and defence.

SOURCES
1. ISRO – isro.gov.in (NavIC)
2. Japan Cabinet Office – qzss.go.jp
3. UNOOSA – unoosa.org (GNSS)

Question 88 | Science & Technology / Defence

Consider the following statements:
1. Ballistic missiles are jet-propelled at subsonic speeds throughout their flights, while cruise missiles are rocket-powered only in the initial phase of flight.
2. Agni-V is a medium-range supersonic cruise missile, while BrahMos is a solid-fuelled intercontinental ballistic missile.

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

ANSWER: (UPSC Set B): (d) Neither 1 nor 2
DETAILED EXPLANATION

- **Statement 1** – Incorrect, roles are reversed. Ballistic missiles are rocket-powered in the initial boost phase and then follow a ballistic (free-fall) trajectory at very high speed; cruise missiles are jet-propelled (air-breathing) and fly at sustained speed.
- **Statement 2** – Incorrect, roles are reversed. Agni-V is a solid-fuelled intercontinental ballistic missile (range 5,000+ km); BrahMos is a supersonic cruise missile (Mach 2.8–3).

➤ **Neither** – option (d).

STATIC + CURRENT AFFAIRS LINK

- Static: Missile classification; IGMDP. Current affairs: Agni-V night trial (December 2022); Agni Prime test (June 2023); BrahMos export deal with the Philippines; Atmanirbharta in defence.

SOURCES

1. DRDO – drdo.gov.in
2. Ministry of Defence – mod.gov.in
3. PIB – pib.gov.in

Question 89 | Environment / Pollution

Consider the following statements regarding mercury pollution:
1. Gold mining activity is a source of mercury pollution in the world.
2. Coal-based thermal power plants cause mercury pollution.
3. There is no known safe level of exposure to mercury.

How many of the above statements are correct?
(a) Only one
(b) Only two
(c) All three
(d) None

ANSWER: (UPSC Set B): (b) Only two
DETAILED EXPLANATION

- **Statement 1** – Correct. Artisanal and small-scale gold mining uses mercury to amalgamate gold and is one of the largest sources of mercury emissions and releases.
- **Statement 2** – Correct. Burning coal releases mercury; coal-fired power plants are a major anthropogenic source of mercury emissions.
- **Statement 3** – Treated as incorrect by the key. Regulators and the WHO set tolerable exposure levels for different forms of mercury, so 'no known safe level' is an absolute claim; mercury is nevertheless highly toxic.

➤ **Two correct** – option (b).

STATIC + CURRENT AFFAIRS LINK

- Static: Heavy metals; bioaccumulation and biomagnification; Minamata disease. Current affairs: Minamata Convention on Mercury (in force 2017; India ratified 2018); phase-out of mercury-containing products (2020–25); Kodaikanal mercury case.

SOURCES

1. UNEP – unep.org (Minamata Convention)
2. MoEFCC – moef.gov.in
3. WHO – who.int (Mercury and health)

Question 90 | Environment / Energy – Green Hydrogen

With reference to green hydrogen, consider the following statements:
1. It can be used directly as a fuel for internal combustion.
2. It can be blended with natural gas and used as fuel for heat or power generation.
3. It can be used in the hydrogen fuel cell to run vehicles.

How many of the above statements are correct?
(a) Only one
(b) Only two
(c) All three
(d) None

ANSWER: (UPSC Set B): (c) All three
DETAILED EXPLANATION
- **Statement 1** – Correct. Hydrogen can burn in modified internal combustion engines.
- **Statement 2** – Correct. Hydrogen can be blended with natural gas in pipelines and burnt for heat or power (H-CNG).
- **Statement 3** – Correct. Fuel cells convert hydrogen to electricity for fuel-cell electric vehicles (buses, trucks, cars).

➤ **All three** – option (c).
STATIC + CURRENT AFFAIRS LINK
- Static: Hydrogen colour code; fuel-cell technology. Current affairs: National Green Hydrogen Mission (January 2023); Green hydrogen pilot buses and Hydrogen Valleys; H-CNG pilots in Delhi and Gujarat; first hydrogen-fuel-cell train plans (Haryana).

SOURCES
1. MNRE – mnre.gov.in (Green Hydrogen Mission)
2. PIB – pib.gov.in
3. IEA – iea.org (Hydrogen)

Question 91 | Economy / MSMEs & Priority Sector

Consider the following statements with reference to India:
1. According to the 'Micro, Small and Medium Enterprises Development (MSMED) Act, 2006, the 'medium enterprises' are those with investments in plant and machinery between ₹15 crore and ₹25 crore.
2. All bank loans to the Micro, Small and Medium Enterprises qualify under the priority sector.

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

ANSWER: (UPSC Set B): (b) 2 only
DETAILED EXPLANATION
- **Statement 1** – Incorrect. Under the MSMED Act 2006 medium manufacturing enterprises had plant-and-machinery investment between ₹5 crore and ₹10 crore; since 2020 a composite criterion applies (medium: investment up to ₹50 crore and turnover up to ₹250 crore, later raised in the 2025 Budget). The ₹15–25 crore range is not the law.
- **Statement 2** – Correct. As per RBI's priority sector lending guidelines, all bank loans to MSMEs (manufacturing and services) qualify under the priority sector, irrespective of size/activity.

➤ **Only statement 2** – option (b).
STATIC + CURRENT AFFAIRS LINK
- Static: MSME classification; priority sector lending (40% target). Current affairs: Revised MSME definition (June 2020); Udyam registration; Emergency Credit Line Guarantee Scheme; Budget 2025 higher investment/turnover limits; Credit Guarantee Scheme for MSMEs.

SOURCES
1. Ministry of MSME – msme.gov.in
2. RBI – rbi.org.in (Priority Sector Lending Master Directions)
3. Economic Survey – Chapter on MSMEs

Question 92 | Economy / Digital Currency

With reference to Central Bank digital currencies, consider the following statements:

1. It is possible to make payments in a digital currency without using US dollar or SWIFT system.
2. A digital currency can be distributed with condition programmed into it such as a time-frame for spending it.

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

ANSWER: (UPSC Set B): (c) Both 1 and 2

DETAILED EXPLANATION

- **Statement 1** – Correct. CBDCs can enable cross-border settlement directly in national currencies on a shared platform (for example Project mBridge), bypassing the US dollar and SWIFT messaging.
- **Statement 2** – Correct. CBDC is programmable money; conditions such as expiry date, specific-use restriction or time-frame can be embedded.

➤ **Both correct** – option (c).

STATIC + CURRENT AFFAIRS LINK

- Static: Digital rupee; RBI Act amendment (2022) enabling CBDC; difference from cryptocurrencies. Current affairs: RBI's e₹ wholesale pilot (1 November 2022) and retail pilot (1 December 2022); mBridge (China, UAE, Thailand, HK); India's G-20 push on cross-border payments.

SOURCES

1. RBI – rbi.org.in (Concept Note on CBDC, 2022)
2. BIS – bis.org (Project mBridge)
3. Economic Survey 2022–23

Question 93 | Economy / Financial Markets

In the context of finance, the term 'beta' refers to

(a) the process of simultaneous buying and selling of an asset from different platforms
(b) an investment strategy of a portfolio manager to balance risk versus reward
(c) a type of systemic risk that arises where perfect hedging is not possible
(d) a numeric value that measures the fluctuations of a stock to changes in the overall stock market.

ANSWER: (UPSC Set B): (d) a numeric value that measures the fluctuations of a stock to changes in the overall stock market.

DETAILED EXPLANATION

- **Option (d)** – Beta measures a stock's sensitivity to market movements. Beta = 1 means it moves with the market; above 1 is more volatile; below 1 is less volatile.
- **Option (a)** – That describes arbitrage.
- **Option (b)** – That describes asset allocation/portfolio strategy.
- **Option (c)** – That describes basis risk or residual hedging risk.

STATIC + CURRENT AFFAIRS LINK

- Static: CAPM; systematic vs unsystematic risk. Current affairs: Market volatility in 2023 (Hindenburg report on Adani, January 2023); SEBI's risk-management reforms; rising retail participation in equity markets.

SOURCES

1. SEBI – sebi.gov.in
2. NSE India – nseindia.com (Investor education)
3. Ramesh Singh – Indian Economy

Question 94 | Economy / Financial Inclusion – SHGs

Consider the following statements:

1. The Self-Help Group (SHG) programme was originally initiated by the State Bank of India by providing microcredit to the financially deprived.
2. In an SHG, all members of a group take responsibility for a loan that an individual member takes.

3. The Regional Rural Banks and Scheduled Commercial Banks support SHGs.

How many of the above statements are correct?

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

ANSWER: (UPSC Set B): (b) Only two

DETAILED EXPLANATION

- **Statement 1** – Incorrect. The SHG–Bank Linkage Programme was initiated by NABARD (pilot 1992), not the SBI.
- **Statement 2** – Correct. SHGs work on joint liability/group guarantee: members collectively take responsibility for loans to individual members.
- **Statement 3** – Correct. Commercial banks, RRBs and cooperative banks lend to SHGs under the linkage programme.

➤ **Two correct** – option (b).

STATIC + CURRENT AFFAIRS LINK

- Static: Microfinance; financial inclusion; NRLM. Current affairs: DAY-NRLM and 'Lakhpati Didi' target of 3 crore (2023); SHG–Bank Linkage covering over a crore SHGs; Mudra loans.

SOURCES

1. NABARD – nabard.org (SHG–Bank Linkage Programme)
2. DAY-NRLM – nrlm.gov.in
3. RBI – rbi.org.in (Financial Inclusion)

Question 95 | Social Issues / Health System

Consider the following statements:

Statement-I: India's public sector health care system largely focuses on curative care with limited preventive, promotive and rehabilitative care.

Statement-II: Under India's decentralized approach to health care delivery, the States are primarily responsible for organizing health services.

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 is the correct explanation for Statement-I
(b) Both Statement-I and Statement-II are correct and Statement-II is not the correct explanation for Statement-I
(c) Statement-I is correct but Statement-II is incorrect
(d) Statement-I is incorrect but Statement-II is correct

ANSWER: (UPSC Set B): (b) Both Statement-I and Statement-II are correct and Statement-II is not the correct explanation for Statement-I

DETAILED EXPLANATION

- **Statement-I** – Correct (per the key). Public health spending and infrastructure have been oriented towards curative care at hospitals, with comparatively limited preventive, promotive and rehabilitative services; this is why Ayushman Bharat Health and Wellness Centres were created.
- **Statement-II** – Correct. 'Public health and sanitation, hospitals and dispensaries' are State List subjects; States organise and finance health services, with the Centre supporting through centrally sponsored schemes (NHM).

➤ Statement-II describes the delivery structure and does not explain why the system is curative-heavy, so it is not the correct explanation – answer (b).

STATIC + CURRENT AFFAIRS LINK

- Static: State List Entry 6; NHM; Health financing – out-of-pocket expenditure. Current affairs: PM-ABHIM (October 2021); Ayushman Bharat Health and Wellness Centres; National Health Accounts showing a rising share of government spending in total health expenditure.

SOURCES

1. National Health Profile – cbhidghs.nic.in

2. NITI Aayog – niti.gov.in (Health reports)
3. Economic Survey 2022–23 (Social Infrastructure)

Question 96 | Geography / Water Resources

Consider the following statements:
Statement-I: According to the United Nations 'World Water Development Report, 2022', India extracts more than a quarter of the world's groundwater withdrawal each year.
Statement-II: India needs to extract more than a quarter of the world's groundwater each year to satisfy the drinking water and sanitation needs of almost 18% of world's population living in its territory.
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 is the correct explanation for Statement-I
(b) Both Statement-I and Statement-II are correct and Statement-II is not the correct explanation for Statement-I
(c) Statement-I is correct but Statement-II is incorrect
(d) Statement-I is incorrect but Statement-II is correct

ANSWER: (UPSC Set B): (c) Statement-I is correct but Statement-II is incorrect
DETAILED EXPLANATION
- **Statement-I** – Correct. The UN World Water Development Report 2022 (theme: groundwater) notes that India extracts about 251 bcm a year, over a quarter of the global total, the highest of any country.
- **Statement-II** – Incorrect. The heavy extraction is mainly for irrigation (around 90% of groundwater use); drinking and sanitation take only a small fraction, so population share does not explain it.

➤ Answer (c).
STATIC + CURRENT AFFAIRS LINK
- Static: Groundwater; Dynamic Ground Water Resources assessment; water table. Current affairs: Atal Bhujal Yojana; Jal Jeevan Mission; Jal Shakti Abhiyan – 'Catch the Rain'; UN 2023 Water Conference (March 2023).

SOURCES
1. UNESCO – World Water Development Report 2022 (unesco.org)
2. Central Ground Water Board – cgwb.gov.in
3. Ministry of Jal Shakti – jalshakti-dowr.gov.in

Question 97 | Polity / Preventive Detention & Internal Security

Consider the following statements:
1. According to the Constitution of India, the Central Government has a duty to protect States from internal disturbances.
2. The Constitution of India exempts the States from providing legal counsel to a person being held for preventive detention.
3. According to the Prevention of Terrorism Act, 2002, confession of the accused before the police cannot be used as evidence.

How many of the above statements are correct?
(a) Only one
(b) Only two
(c) All three
(d) None

ANSWER: (UPSC Set B): (b) Only two
DETAILED EXPLANATION
- **Statement 1** – Correct. Article 355 casts a duty on the Union to protect every State against external aggression and internal disturbance.
- **Statement 2** – Accepted as correct. Under Article 22(3)(b), the safeguards of Article 22(1) and (2) – including the right to consult and be defended by a legal practitioner – are not available to persons

detained under preventive detention laws; Article 22(4)–(7) give separate safeguards (Advisory Board, grounds of detention).

- **Statement 3** – Incorrect. POTA 2002 (Section 32) made confessions made to a police officer (of Superintendent rank or above) admissible as evidence, unlike the ordinary law (Section 25 of the Indian Evidence Act). POTA was repealed in 2004.

➤ **Two correct** – option (b).

STATIC + CURRENT AFFAIRS LINK

- Static: Articles 22, 355, 356; Emergency provisions; UAPA. Current affairs: Violence in Manipur (May 2023) and the debate on Article 355; UAPA amendment 2019 and bail jurisprudence; replacement of CrPC by BNSS (2023 Bills).

SOURCES

1. M. Laxmikanth – Indian Polity (Preventive detention; Emergency provisions)
2. Constitution of India – Articles 22, 355 (legislative.gov.in)
3. PRS Legislative Research – prsindia.org

Question 98 | International Relations / Africa

Which one of the following countries has been suffering from decades of civil strife and food shortages and was in news in the recent past for its very severe famine?

(a) Angola
(b) Costa Rica
(c) Ecuador
(d) Somalia

ANSWER: (UPSC Set B): (d) Somalia

DETAILED EXPLANATION

- **Option (d)** – Somalia has endured civil war and instability since 1991, al-Shabaab insurgency and repeated droughts; the 2022 Horn of Africa drought put parts of Somalia at risk of famine.
- **Option (a)** – Angola's civil war ended in 2002; no recent famine of this kind.
- **Options (b), (c)** – Costa Rica and Ecuador (Latin America) are not conflict-torn famine cases.

STATIC + CURRENT AFFAIRS LINK

- Static: Horn of Africa; climate and food security. Current affairs: Worst drought in four decades in the Horn of Africa (2020–23); WFP appeals; India's wheat export ban (May 2022) and humanitarian shipments; Sudan crisis (2023).

SOURCES

1. UN World Food Programme – wfp.org
2. UN OCHA – unocha.org
3. The Hindu – International

Question 99 | Environment / Biodiversity Governance

Consider the following statements:

1. In India, the Biodiversity Management Committees are key to the realization of the objectives of the Nagoya Protocol.
2. The Biodiversity Management Committees have important functions in determining access and benefit sharing, including the power to levy collection fees on the access of biological resources within its jurisdiction.

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

ANSWER: (UPSC Set B): (c) Both 1 and 2

DETAILED EXPLANATION

- **Statement 1** – Correct. BMCs, set up at local-body level under the Biological Diversity Act 2002, document biodiversity (People's Biodiversity Registers), and are central to implementing access and benefit-sharing (ABS) under the Nagoya Protocol.
- **Statement 2** – Correct. BMCs are consulted on access and benefit-sharing and may levy collection fees for access to biological resources and knowledge within their area (Biological Diversity Rules, 2004).

➤ **Both correct** – option (c).

STATIC + CURRENT AFFAIRS LINK

- Static: CBD, Nagoya Protocol (2010), Biological Diversity Act 2002 – NBA, SBBs and BMCs. Current affairs: Biological Diversity (Amendment) Act 2023 (exempting AYUSH practitioners and simplifying approvals); Kunming–Montreal Global Biodiversity Framework (December 2022).

SOURCES

1. National Biodiversity Authority – nba.nic.in
2. Biological Diversity Act 2002 and Rules 2004 – indiacode.nic.in
3. CBD – cbd.int (Nagoya Protocol)

Question 100 | Polity / Election of the President

Consider the following statements in respect of election to the President of India:

1. The members nominated to either House of the Parliament or the Legislative Assemblies of States are also eligible to be included in the Electoral College.
2. Higher the number of elective Assembly seats, higher is the value of vote of each MLA of that State.
3. The value of vote of each MLA of Madhya Pradesh is greater than that of Kerala.
4. The value of vote of each MLA of Puducherry is higher than that of Arunachal Pradesh because the ratio of total population to total number of elective seats in Puducherry is greater as compared to Arunachal Pradesh.

How many of the above statements are correct?

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

ANSWER: (UPSC Set B): (a) Only one

DETAILED EXPLANATION

- **Statement 1** – Incorrect. Only the elected members of Parliament and State Legislative Assemblies (including Delhi and Puducherry) form the Electoral College (Article 54); nominated members are excluded, as are Legislative Council members.
- **Statement 2** – Incorrect. Value of an MLA's vote = State population (1971) ÷ (number of elected MLAs × 1,000). More elective seats lowers the value of each vote.
- **Statement 3** – Incorrect. In the 2022 election an MLA's vote was worth 131 in Madhya Pradesh and 152 in Kerala, so Kerala's is higher.
- **Statement 4** – Correct. Puducherry (value 16) exceeds Arunachal Pradesh (value 8) because 1971 population per elected seat is larger in Puducherry.

➤ **Only one correct** – option (a).

STATIC + CURRENT AFFAIRS LINK

Static: Article 54–55; proportional representation by single transferable vote; 84th Amendment (freezing 1971 population until 2026). Current affairs: Presidential election of July 2022 (Droupadi Murmu; value of an MP's vote 700); delimitation debate after 2026.

SOURCES

1. M. Laxmikanth – Indian Polity (Election of the President)
2. Election Commission of India – eci.gov.in
3. Constitution of India – Articles 54 and 55