IAS WITH DR RAVI · APPSC GROUP 1

Day 30
English MCQ Practice and Explanations

1,000 Topics in 100 Days

Topics 291–300

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Badami Chalukya art and architecture: Aihole, Badami and Pattadakal

MCQs

Q1. Consider the following pairs of Badami Chalukya temples and their features:

Temple	Feature
1. Meguti temple, Aihole	Carries Ravikirti's prasasti of Saka 556
2. Durga temple, Aihole	Apsidal plan, like a Buddhist chaitya hall
3. Virupaksha temple, Pattadakal	Originally called Lokeshvara
4. Sangameshvara temple, Pattadakal	Built by Queen Trailokyamahadevi

How many of the pairs given above are correctly matched?

- (1) Only one pair
- (2) Only two pairs
- (3) Only three pairs
- (4) All four pairs

Q2. Consider the following statements about the Badami Chalukya monuments:

1. According to the ASI, the name Pattadakal refers to the coronation of the Chalukya kings there.
2. Of the four cave temples at Badami, three are Hindu and one is Jain.
3. The Virupaksha temple at Pattadakal was modelled on the Kailasa temple at Ellora.
4. In the Pattadakal group, the Galaganatha temple is built in the northern (nagara) style.

Which of the statements given above is/are correct?

- (1) 1, 2 and 4 only
- (2) 1, 3 and 4 only
- (3) 2 and 3 only
- (4) 1 and 2 only

Article 32 and the five writs

MCQs

Q1. Consider the following statements about Article 32 of the Constitution of India:

1. Article 32 itself provides that the right guaranteed by it shall not be suspended except as otherwise provided for by the Constitution.
2. Under Article 32(3), Parliament may by law empower any other court to exercise, throughout the territory of India, all or any of the powers exercisable by the Supreme Court under Article 32(2).
3. In Romesh Thappar v. State of Madras (1950), the Supreme Court held that a petitioner under Article 32 must first show that he has approached the High Court under Article 226.
4. In L. Chandra Kumar v. Union of India (1997), the Supreme Court held that the power of judicial review over legislative action vested in the High Courts under Article 226 and in the Supreme Court under Article 32 is part of the basic structure of the Constitution.

Which of the statements given above is/are correct?

- (1) 1 and 2 only
- (2) 2 and 3 only
- (3) 3 and 4 only
- (4) 1 and 4 only

Q2. Consider the following statements about the writs:

1. A writ of prohibition is issued to quash a decision after the proceedings before a lower court or tribunal have ended in a final decision.
2. According to NCERT, the writ of mandamus is issued when a lower court has taken up a case going beyond its jurisdiction.

3. In Hari Vishnu Kamath v. Syed Ahmad Ishaque, the Supreme Court accepted that writs of prohibition and certiorari could be issued not merely to courts but to all authorities exercising judicial or quasi-judicial functions.
4. Article 32(2) confines the Supreme Court to the five writs it names: habeas corpus, mandamus, prohibition, quo warranto and certiorari.

Which of the statements given above is/are correct?

- (1) 2 and 4 only
- (2) 3 only
- (3) 1 and 3 only
- (4) 1, 2 and 4 only

Make in India and the Production Linked Incentive scheme

MCQs

Q1. Consider the following statements about Make in India and the PLI schemes:

1. As set out in February 2021, Make in India 2.0 covers 27 sectors, in which the Department of Commerce coordinates the 15 manufacturing sectors and DPIIT the 12 service sectors.
2. In the PLI scheme for large-scale electronics manufacturing, the incentive is calculated on incremental sales over a base year, not on a firm's total sales.
3. The Cabinet decision of 11 November 2020 approved PLI schemes for ten sectors in addition to those already notified for electronics, pharmaceutical ingredients and medical devices.
4. According to the Economic Survey 2025-26, PLI incentives had been disbursed in 12 of the 14 PLI sectors till September 2025.

Which of the statements given above is/are correct?

- (1) 1, 2 and 3 only
- (2) 2, 3 and 4 only
- (3) 1 and 4 only
- (4) 3 and 4 only

Q2. Consider the following statements:

1. The official Make in India website gives the goal of raising the manufacturing sector's share of GDP to 25 per cent by 2035.
2. Among the four pillars of Make in India, "New Sectors" stands for industrial corridors, smart cities and high-speed communication.
3. The Union Budget 2026-27 proposed to reduce the outlay of the Electronics Components Manufacturing Scheme, because investment commitments had fallen short of the target.

4. According to a Lok Sabha answer of July 2025, India had turned from a net importer of bulk drugs, as it was in 2021-22, into a net exporter.

Which of the statements given above is/are correct?

- (1) 1 and 2 only
- (2) 2, 3 and 4 only
- (3) 4 only
- (4) 1 and 3 only

Factors of industrial location

MCQs

Q1. Match List I (manufacturing industries) with List II (the main pull on location, as the textbooks describe it):

List I	List II
A. Sugar industry	1. Nearness to the market, which has now become the dominant factor
B. Aluminium industry	2. Nearness to the raw material, because the raw material is bulky and its useful content falls during haulage
C. Cotton textile industry	3. No dependence on any specific raw material, so units can be located in a wide variety of places
D. Mobile phone manufacturing industry	4. A large and regular supply of power

- (1) A-2, B-4, C-1, D-3
- (2) A-2, B-4, C-3, D-1
- (3) A-4, B-2, C-3, D-1
- (4) A-4, B-2, C-1, D-3

Q2. Consider the following statements about industrial location:

1. In Alfred Weber's least-cost theory, an industry whose material index is less than 1 tends to be located at the source of its raw material.
2. Sugar mills in India have tended to shift towards the southern and western States, where the cane has a higher sucrose content.
3. In NCERT's Class X classification by ownership, Oil India Ltd. is given as an example of the cooperative sector.

4. In Weber's theory, transport costs are the most important factor, and labour costs and agglomeration adjust the location of least transport cost.

Which of the statements given above is/are correct?

- (1) 1 and 2 only
- (2) 3 and 4 only
- (3) 1 and 3 only
- (4) 2 and 4 only

Physical divisions of Andhra Pradesh: coastal plains, Eastern Ghats and Rayalaseema plateau

MCQs

Q1. Consider the following pairs of a hill range of Andhra Pradesh and a feature of it:

Hill range	Feature
1. Seshachalam	Srisailam, on the Krishna, lies in this range
2. Velikonda	It descends to the coastal plain in northern Nellore district
3. Erramala	It lies between the Krishna basin to the north and the Penna basin to the south
4. Palkonda	The Penna cuts the Gandikota gorge through this range

How many of the pairs given above are correctly matched?

- (1) Only one pair
- (2) Only two pairs
- (3) Only three pairs
- (4) All four pairs

Q2. Consider the following statements about the coastal plain and the plateau of Andhra Pradesh:

1. By the coastline figures re-measured and promulgated in 2025, Andhra Pradesh has a shorter coastline than Tamil Nadu.
2. According to NCERT, the eastern coastal plain is an example of an emergent coast.

3. The Belum caves are a karst feature formed in limestone.
4. According to NCERT, the wide continental shelf off the eastern coastal plain makes it easy to develop good ports and harbours.

Which of the statements given above is/are correct?

- (1) 1 and 4 only
- (2) 2 and 3 only
- (3) 1, 2 and 3 only
- (4) 2 and 4 only

Aadhaar, India Stack and digital public infrastructure

MCQs

Q1. Consider the following statements:

1. Under the Reserve Bank of India's Master Direction on Account Aggregators (2016), the financial information that an Account Aggregator obtains from a Financial Information Provider must not reside with the Account Aggregator.
2. The G20 New Delhi Leaders' Declaration (2023) adopted the G20 Framework for Systems of Digital Public Infrastructure as a framework binding on all G20 members.
3. In the Puttaswamy (Aadhaar) judgment of 2018, the Supreme Court held section 139AA of the Income-tax Act, 1961, on seeding PAN with Aadhaar, to be constitutional.
4. In the Puttaswamy (Aadhaar) judgment of 2018, the Supreme Court upheld the Department of Telecommunications circular of 23 March 2017 that mandated linking mobile numbers with Aadhaar.

Which of the statements given above is/are correct?

- (1) 1 and 3 only
- (2) 2 and 4 only
- (3) 1 and 4 only
- (4) 2 and 3 only

Q2. Match List I (Building block of digital public infrastructure) with List II (Year of its launch or establishment):

List I (Building block)	List II (Year)
A. MOSIP	1. 2010

List I (Building block)	List II (Year)
B. DigiLocker	2. 2015
C. Aadhaar	3. 2018
D. ONDC	4. 2022

- (1) A-2, B-3, C-4, D-1
- (2) A-3, B-2, C-4, D-1
- (3) A-2, B-3, C-1, D-4
- (4) A-3, B-2, C-1, D-4

Remote sensing: principles, spatial resolution and passive versus active sensors

MCQs

Q1. Consider the following statements about the principles of remote sensing:

1. A fresh water body absorbs more energy in the red and infrared regions and so appears dark in satellite images.
2. Radiometric resolution is the number of wavelength bands in which a sensor records energy.
3. Temporal resolution is the revisit time, the interval after which a satellite observes the same area again.
4. A whiskbroom scanner uses a rotating mirror to sweep across the ground.

Which of the statements given above is/are correct?

- (1) 1, 2 and 4 only
- (2) 2 and 3 only
- (3) 3 and 4 only
- (4) 1, 3 and 4 only

Q2. Consider the following pairs of sensor and feature:

Sensor	Feature
1. LISS-IV (Resourcesat-1)	Sends out pulses of near-infrared laser light
2. SAR of EOS-04 (RISAT-1A)	Sends out microwave pulses in the L and S bands
3. AWiFS (Resourcesat-1)	Spatial resolution of 56 m
4. LISS-III (Resourcesat-1)	Spatial resolution of 5.8 m

How many of the pairs given above are correctly matched?

- (1) Only one pair
- (2) Only two pairs
- (3) Only three pairs
- (4) All four pairs

Blood relations: coded relations

MCQs

Q1. In a code, "P + Q" means P is the father of Q; "P − Q" means P is the wife of Q; "P × Q" means P is the brother of Q; and "P ÷ Q" means P is the daughter of Q. If "J ÷ K + L − M + N", how is J related to N?

- (1) Father's sister
- (2) Mother's brother
- (3) Mother's sister
- (4) Father's brother

Q2. In a code, "P $ Q" means P is the mother of Q; "P # Q" means P is the father of Q; "P @ Q" means P is the sister of Q; and "P % Q" means P is a child of Q. Which of the following expressions shows with certainty that W is the mother's mother of Z?

- (1) W $ Y # Z @ X
- (2) X @ W $ Y $ Z
- (3) Z % Y @ X % W
- (4) Z $ Y @ X $ W

Squares: quick methods

MCQs

Q1. What is the value of 937^2?

- (1) 871,969
- (2) 874,969
- (3) 877,609
- (4) 877,969

Q2. Which one of the following numbers is a perfect square?

- (1) 11,449
- (2) 11,866
- (3) 12,261
- (4) 12,889

Current affairs: the Economic Stabilisation Fund and supplementary demands for grants

MCQs

Q1. Consider the following statements about grants made outside the regular Budget:

1. A demand for an excess grant, for money spent on a service beyond the amount granted for it for that year, is made under Article 116 of the Constitution.
2. An additional grant is sought for money already spent on a service in excess of the amount granted for that service for that year.
3. Under Article 116, a vote of credit is meant for an unexpected demand upon the resources of India that cannot be stated with the details ordinarily given in an annual financial statement.
4. A supplementary grant may be sought when the amount authorised by law for a particular service for the current financial year is found to be insufficient for the purposes of that year.

Which of the statements given above is/are correct?

- (1) 1 and 2 only
- (2) 1 and 3 only
- (3) 3 and 4 only
- (4) 2 and 4 only

Q2. Consider the following statements about the second batch of supplementary demands for grants for 2025-26 and the funds connected with it:

1. Money can be advanced from the Contingency Fund of India only after Parliament has authorised that expenditure by law.

2. The fresh cash provision reported for the Economic Stabilisation Fund in the second batch of supplementary demands for grants for 2025-26 was a little over Rs 57,000 crore.
3. The corpus of the Contingency Fund of India, as authorised by Parliament, is larger than the fresh cash provision reported for the Economic Stabilisation Fund in the second batch of supplementary demands for grants for 2025-26.
4. The second batch of supplementary demands for grants for 2025-26 was voted on by both Houses of Parliament.

Which of the statements given above is/are correct?

- (1) 1 and 4 only
- (2) 2 only
- (3) 2 and 3 only
- (4) 1, 3 and 4 only

Answer key at a glance

Topic	Q1	Q2
291	3	1
292	4	2
293	2	3
294	1	4
295	2	3
296	1	4
297	4	1
298	3	2
299	4	1
300	3	2

Detailed explanations follow on the next pages.

Badami Chalukya art and architecture: Aihole, Badami and Pattadakal

Answer key and explanations

Q1. Answer: (3) Only three pairs

- Pair 1 is correct: the ASI says the Meguti temple was completed around 634, according to the inscription on its eastern wall; that inscription is Ravikirti's prasasti of Saka 556 (634-35 CE) on Pulakesin II.
- Pair 2 is correct: the ASI says the Durga temple at Aihole has an apsidal plan that imitates the Buddhist rock-cut chaitya halls.
- Pair 3 is correct: the ASI says the Virupaksha was originally called Lokeshvara, after Lokamahadevi, the chief queen of Vikramaditya II, who built it; ICOMOS dates the temple to about 740.
- Pair 4 is wrong: the Sangameshvara is the earliest datable temple of the group, built from 696 to 733 in the reign of Vijayaditya. The Bagalkot district administration says Vijayaditya built it. Queen Trailokyamahadevi built the Mallikarjuna, the dravida temple that stands beside the Virupaksha.
- Count: pairs 1, 2 and 3 are correct, so three pairs are correctly matched.
- Why (1) is wrong: a candidate reaches "only one" by making two mistakes: he exchanges the two queens' temples (and so takes Lokeshvara for the original name of the Mallikarjuna, rejecting pair 3 as well as pair 4), and he also places Ravikirti's inscription at Badami, the capital, instead of on the Meguti at Aihole. Only pair 2 is then left.
- Why (2) is wrong: a candidate reaches "only two" by exchanging the two queens: believing that Lokamahadevi built the Mallikarjuna, he takes Lokeshvara for that temple's original name and rejects pair 3 as well as pair 4.
- Why (4) is wrong: a candidate reaches "all four" by remembering only that two queens built temples at Pattadakal, and by mistaking the Sangameshvara, a dravida temple like the Mallikarjuna, for the queen's temple beside the Virupaksha.

Q2. Answer: (1) 1, 2 and 4 only

- Statement 1 is correct: the ASI says the Chalukya kings were crowned at Pattadakal, which gives it the name Pattada-Kisuvolal or Pattadakal, "the place of coronation".
- Statement 2 is correct: Cave 1 is dedicated to Shiva, Caves 2 and 3 to Vishnu, and Cave 4 to the Jain Tirthankaras.
- Statement 3 is wrong: it reverses the relation. Studies of Ellora hold that its Kailasa temple, cut later in the 8th century, drew on the Virupaksha, which was built earlier, about 740. The Virupaksha itself resembles the Kailasanatha temple at Kanchipuram, the Pallava capital.
- Statement 4 is correct: the ASI calls the Galaganatha a fully developed temple in the northern rekha-nagara style, and ICOMOS says its design was strongly influenced by northern India.
- Why the other options are wrong: (2) includes statement 3, which is wrong, and leaves out statement 2. (3) includes statement 3 and leaves out statements 1 and 4. (4) leaves out statement 4, which is correct.

Article 32 and the five writs

Answer key and explanations

Q1. Answer: (4) 1 and 4 only

- Statement 1 is correct: Article 32(4) reads, "The right guaranteed by this article shall not be suspended except as otherwise provided for by this Constitution." Article 359 is the provision that does so.
- Statement 2 is wrong: Article 32(3) lets Parliament empower another court to exercise the powers of clause (2) only "within the local limits of its jurisdiction", not throughout India, and "without prejudice to" the Supreme Court's own powers.
- Statement 3 is wrong: Romesh Thappar rejected exactly this objection. The Court said it is "the protector and guarantor of fundamental rights" and "cannot … refuse to entertain applications seeking protection against infringements of such rights", even when the petitioner has not gone to the High Court.
- Statement 4 is correct: L. Chandra Kumar (1997, seven judges) held that judicial review over legislative action under Articles 226 and 32 "is an integral and essential feature of the Constitution, constituting part of its basic structure".
- Why the other options are wrong: (1) includes statement 2, which is wrong, and leaves out statement 4. (2) includes statements 2 and 3, both wrong. (3) includes statement 3, which is wrong, and leaves out statement 1.

Q2. Answer: (2) 3 only

- Statement 1 is wrong: that describes certiorari. Hari Vishnu Kamath says that broadly a writ of prohibition lies "when the proceedings are to any extent pending", and certiorari "for quashing after they have terminated in a final decision".
- Statement 2 is wrong: NCERT gives this description to prohibition. For mandamus NCERT says it is issued when an office holder is not doing a legal duty and so infringes the right of an individual.

- Statement 3 is correct: in Hari Vishnu Kamath (decided on 9 December 1954) the Court accepted, from an English decision it discussed, that both writs "could be issued not merely to courts but to all authorities exercising judicial or quasi-judicial functions".
- Statement 4 is wrong: Article 32(2) gives the power to issue "directions or orders or writs, including writs in the nature of" the five. "Including" does not confine the Court to them.
- Why the other options are wrong: (1) includes statements 2 and 4, both wrong, and leaves out statement 3. (3) includes statement 1, which is wrong. (4) includes statements 1, 2 and 4, all wrong, and leaves out statement 3.

Make in India and the Production Linked Incentive scheme

Answer key and explanations

Q1. Answer: (2) 2, 3 and 4 only

- Statement 1 is wrong: Make in India 2.0 does cover 27 sectors, but the roles are the other way round. DPIIT coordinates the 15 manufacturing sectors, and the Department of Commerce coordinates the 12 service sectors.
- Statement 2 is correct: the electronics scheme pays 4 to 6 per cent on incremental sales over the base year, for five years after the base year.
- Statement 3 is correct: on 11 November 2020 the Cabinet approved PLI schemes for ten more sectors with Rs 1,45,980 crore. These came on top of the schemes already notified for mobile phones and electronic components, for drug ingredients (APIs) and for medical devices.
- Statement 4 is correct: the Survey says cumulative incentives of Rs 23,946 crore had been disbursed across 12 sectors till September 2025, while the schemes cover 14 sectors.
- Why the other options are wrong: (1) includes statement 1, which is wrong, and leaves out statement 4. (3) includes statement 1 and leaves out statements 2 and 3. (4) leaves out statement 2, which is correct.

Q2. Answer: (3) 4 only

- Statement 1 is wrong: the Make in India website gives the goal of 25 per cent of GDP by 2020. The year 2035 belongs to the proposed targets of the National Manufacturing Mission reported in the Economic Survey 2025-26.
- Statement 2 is wrong: industrial corridors, smart cities and high-speed communication fall under "New Infrastructure". "New Sectors" stands for opening FDI in defence production, insurance, medical devices, construction and railway infrastructure.

- Statement 3 is wrong: the Budget 2026-27 proposed raising the outlay from Rs 22,919 crore to Rs 40,000 crore, because investment commitments already exceed the target.
- Statement 4 is correct: the Lok Sabha answer of 22 July 2025 says India became a net exporter of bulk drugs (Rs 2,280 crore) from a net importer (minus Rs 1,930 crore), as it was in 2021-22. PIB (August 2025) dates the Rs 2,280 crore surplus to 2024-25.
- Why the other options are wrong: (1) includes statements 1 and 2, both wrong, and leaves out statement 4. (2) includes statements 2 and 3, both wrong. (4) includes statements 1 and 3, both wrong, and leaves out statement 4.

Factors of industrial location

Answer key and explanations

Q1. Answer: (1) A-2, B-4, C-1, D-3

- A-2: NCERT Class X says the sugar industry's raw material is bulky and loses sucrose in haulage, and NIOS calls sugarcane perishable. NCERT Class XII lists sugar among industries located close to their raw material.
- B-4: NCERT Class XII gives the aluminium industry as its example of industries that use more power and are located close to the source of energy. NCERT Class X calls a regular supply of electricity one of the two prime factors for aluminium smelting.
- C-1: NIOS says that nowadays the market has become the dominant factor in locating the cotton textile industry. The earlier edition of NCERT Class XII *India: People and Economy* says that cotton is a pure raw material that does not lose weight in manufacturing, and that at present the trend is to locate the industry at or close to markets. Item 3 does not fit: the industry depends on a specific raw material, cotton.
- D-3: NIOS gives mobile manufacturing as a footloose industry, and NCERT Class XII says footloose industries do not depend on any specific raw material and can be located in a wide variety of places.
- Why the other options are wrong: (2) exchanges C and D, treating cotton textiles as footloose and mobile phone manufacturing as market-led. (3) makes both exchanges. (4) exchanges A and B: bauxite, the aluminium industry's raw material, is bulky, but the textbooks give a fall in content during haulage for sugarcane, not for bauxite; and NCERT does not name sugar as a power-led industry.

Q2. Answer: (4) 2 and 4 only

- Statement 1 is wrong: a material index less than 1 pulls production to the place of consumption (the market). An index above 1 (weight-losing materials) pulls it to the deposits of raw material.

- Statement 2 is correct: NCERT Class X says sugar mills tend to shift and concentrate in the southern and western States, especially Maharashtra, because the cane there has a higher sucrose content.
- Statement 3 is wrong: NCERT Class X gives Oil India Ltd. as jointly owned by the public and private sector, that is, the joint sector. Its examples of the cooperative sector are the sugar industry in Maharashtra and the coir industry in Kerala.
- Statement 4 is correct: Weber named transport costs, labour costs and agglomeration; transport is the most important, and the other two only adjust the least-transport-cost site.
- Why the other options are wrong: (1) includes statement 1, which is wrong, and leaves out statement 4. (2) includes statement 3, which is wrong, and leaves out statement 2. (3) includes statements 1 and 3, which are both wrong.

Physical divisions of Andhra Pradesh: coastal plains, Eastern Ghats and Rayalaseema plateau

Answer key and explanations

Q1. Answer: (2) Only two pairs

- Pair 1 is wrong: Srisailam, on the Krishna, lies in the Nallamala, not in the Seshachalam. The Seshachalam hills, mostly in Tirupati district, carry Tirumala and the State's one biosphere reserve.
- Pair 2 is correct: ZSI says the Velikonda, the lower eastern range, descends to the coastal plains in northern Nellore district.
- Pair 3 is correct: Britannica places the Erramala, on the eastern edge of the Deccan plateau, between the Krishna basin to the north and the Penna basin to the south.
- Pair 4 is wrong: at Gandikota the Penna flows through its gorge between the cliffs of the Erramala hills, which Wikipedia calls the Gandikota hills. The Palkonda is one of the higher western ranges; with the Nallamala, it surrounds Kadapa city on three sides.
- So two pairs (2 and 3) are correctly matched.
- Why (1) is wrong: a candidate reaches one pair by rejecting pair 3, thinking that this place between the two basins belongs to the Nallamala, which runs between the Krishna and the Penna; or by rejecting pair 2, taking the Velikonda for a western range.
- Why (3) is wrong: a candidate reaches three pairs by accepting pair 4, because the Palkonda and Gandikota both lie in Kadapa district, or by accepting pair 1, because the Seshachalam and the Nallamala both lie in the Rayalaseema region.
- Why (4) is wrong: a candidate reaches all four only by accepting both wrong pairs, mixing up the Seshachalam with the Nallamala and the Palkonda with the Erramala.

Q2. Answer: (3) 1, 2 and 3 only

- Statement 1 is correct: by the re-measured figures promulgated on 29 April 2025, Tamil Nadu has 1,068.69 km and Andhra Pradesh 1,053.07 km. By the old figures Andhra Pradesh (973.7 km) was ahead of Tamil Nadu (906.9 km).
- Statement 2 is correct: NCERT says that, compared with the western coastal plain, the eastern coastal plain is broader and is an example of an emergent coast.
- Statement 3 is correct: the Belum caves in Nandyal district are a karst feature, formed when water dissolved limestone.
- Statement 4 is wrong: NCERT says the continental shelf off the eastern coast extends up to 500 km into the sea, which makes it difficult to develop good ports and harbours.
- Why the other options are wrong: (1) includes statement 4, which is wrong, and leaves out statements 2 and 3, which are correct. (2) leaves out statement 1, which is correct by the re-measured figures. (4) includes statement 4, which is wrong, and leaves out statements 1 and 3, which are correct.

Aadhaar, India Stack and digital public infrastructure

Answer key and explanations

Q1. Answer: (1) 1 and 3 only

- Statement 1 is correct: the RBI's Master Direction of 2 September 2016 says the financial information an Account Aggregator obtains from providers must not reside with it, and that the information is not its property. It serves the customer only on explicit consent.
- Statement 2 is wrong: paragraph 56 of the Declaration welcomed the Framework as "a voluntary and suggested framework", not a binding one.
- Statement 3 is correct: the Court held section 139AA of the Income-tax Act, 1961 (seeding PAN with Aadhaar) constitutional.
- Statement 4 is wrong: the Court held the Department of Telecommunications circular of 23 March 2017 unconstitutional. Later, the 2019 amendment allowed only the voluntary use of Aadhaar authentication for getting a SIM card.
- Why the other options are wrong: (2) contains both wrong statements. (3) contains statement 4 and leaves out statement 3. (4) contains statement 2 and leaves out statement 1.

Q2. Answer: (4) A-3, B-2, C-1, D-4

- Why it is correct: MOSIP was established in 2018 at IIIT Bangalore (A-3). DigiLocker came in 2015 (B-2). Aadhaar was launched on 29 September 2010 at Tembhli, when the first Aadhaar was issued (C-1). ONDC came in 2022 (D-4).
- Why (1) is wrong: it makes both exchanges. It gives MOSIP 2015 and DigiLocker 2018, and Aadhaar 2022 and ONDC 2010.
- Why (2) is wrong: it exchanges Aadhaar and ONDC. Aadhaar was launched in 2010; UIDAI's set-up in 2009 is a third date, not either of these. ONDC, the open network for trade, came in 2022.

- Why (3) is wrong: it exchanges MOSIP and DigiLocker. DigiLocker, MeitY's document wallet, came in 2015; MOSIP, the identity platform for other countries, began at IIIT Bangalore three years later, in 2018.

Remote sensing: principles, spatial resolution and passive versus active sensors

Answer key and explanations

Q1. Answer: (4) 1, 3 and 4 only

- Statement 1 is correct: NCERT says a fresh water body absorbs more energy in the red and infrared regions of the spectrum and so appears dark in satellite images.
- Statement 2 is wrong: the number and narrowness of the bands is spectral resolution. Radiometric resolution is the sensor's capability to discriminate between two targets by small differences in energy, shown by its grey levels (0 to 127 for IRS sensors, 0 to 255 for Landsat TM).
- Statement 3 is correct: NCERT calls temporal resolution the revisit time of the satellite over the same area. It is not the orbital period: a sun-synchronous satellite goes round the earth about 14 times a day, but LISS-III comes back over the same area only every 24 days.
- Statement 4 is correct: NCERT says whiskbroom scanners are made up of a rotating mirror and a single detector, which sweeps across the field of view as the mirror turns. A pushbroom scanner instead uses a line of detectors.
- Why the other options are wrong: (1) includes statement 2, which is wrong, and leaves out statement 3. (2) includes statement 2 and leaves out statements 1 and 4. (3) leaves out statement 1, which is correct.

Q2. Answer: (1) Only one pair

- Pair 1 is wrong: LISS-IV is a passive sensor that records reflected sunlight in green, red and near-infrared bands at 5.8 m. Sending out near-infrared laser pulses is what topographic lidar does.
- Pair 2 is wrong: the SAR of EOS-04 works in the C band. L-band and S-band SAR data are collected by NISAR.

- Pair 3 is correct: NRSC gives AWiFS a spatial resolution of 56 m at nadir, over a 740 km swath.
- Pair 4 is wrong: LISS-III has a resolution of 23.5 m (NRSC; 23 m in NCERT's table). The 5.8 m figure belongs to LISS-IV.
- So only pair 3 is correctly matched: one pair.
- Why (2) is wrong: a candidate reaches two pairs by one mistake: taking LISS-IV for an active sensor because it has a near-infrared band, or giving EOS-04 the bands of NISAR, or mixing up the resolutions of LISS-III and LISS-IV.
- Why (3) is wrong: three pairs comes from two of these mistakes together, for example mixing up the two LISS sensors and also the two radars.
- Why (4) is wrong: all four pairs would mean making all three mistakes: treating LISS-IV as active, putting EOS-04 in the L and S bands and giving LISS-III the 5.8 m of LISS-IV.

Blood relations: coded relations

Answer key and explanations

Q1. Answer: (3) Mother's sister

- Worked solution, "J ÷ K": J is the daughter of K, so J is female and one level below K.
- "K + L": K is the father of L. J and L are both children of K, so they are siblings.
- "L − M": L is the wife of M, so L is female and M is male.
- "M + N": M is the father of N. A child of one member of a couple is a child of both, so L is the mother of N.
- Tree: K (M); his daughters J (F) and L (F); L (F) = M (M); N (?), the child of L and M.
- Read the answer: start at N, go up to the mother L, then across to her sister J. J is the mother's sister of N. Count from N: +1 0 = +1. The gender of N is not needed.
- Why (1) is wrong: "Father's sister" joins J to the wrong spouse. J is the sister of L, the wife; M, the father of N, is only her sister's husband. Taking J as M's sister (or reading "L − M" backwards, as "M is the wife of L") moves J to the father's side.
- Why (2) is wrong: "Mother's brother" gets J's gender wrong. The code "÷" makes J a daughter, so J is female; no code makes J male.
- Why (4) is wrong: "Father's brother" makes both mistakes together: the wrong side and the wrong gender.

Q2. Answer: (2) X @ W $ Y $ Z

- Worked solution, option (2): "X @ W" makes X the sister of W; it adds nothing that matters. "W $ Y": W is the mother of Y, so W is female. "Y $ Z": Y is the mother of Z, so Y is female.
- So W is the mother of Z's mother: the mother's mother (maternal grandmother, అమ్మమ్మ). Both genders the relation needs (W female and Z's parent Y female) are fixed by codes. Count from Z: +1 +1 = +2.

- Tree: X (F) and W (F), sisters; Y (F), the daughter of W; Z (?), the child of Y.
- Why (1) is wrong: "Y # Z" makes Y the father of Z, so W is the father's mother (paternal grandmother, నానమ్మ). It gives the paternal side.
- Why (3) is wrong: it leaves a gender open. "Z % Y" makes Z a child of Y, and "Y @ X" makes Y female, so Y is Z's mother. "X % W" makes X a child of W, so W is a parent of X and of X's sister Y. W is a parent of Z's mother, but no code fixes W's gender: W may be the grandfather.
- Why (4) is wrong: it reads the codes backwards. Decoded as the key says, "Z $ Y" makes Z the mother of Y, "Y @ X" makes X another child of Z, and "X $ W" makes X the mother of W. Z is then the mother's mother of W, the reverse relation. It shows the asked relation only if every code is read as "Q is the ... of P".

Squares: quick methods

Answer key and explanations

Q1. Answer: (4) 877,969

- Worked solution, step 1: take the base 1,000. 937 = 1,000 - 63, so d = -63. Left part N + d = 937 - 63 = 874.
- Step 2: $d^2 = 63^2 = (60 + 3)^2 = 3,600 + 360 + 9 = 3,969$. The base 1,000 has three zeros, so the right part takes three digits, 969, and the extra 3 is carried. d^2 is positive, so the carry is added: 874 + 3 = 877.
- Step 3: $937^2 = 877,969$.
- Check by $(a + b)^2$: $(900 + 37)^2 = 810,000 + 66,600 + 1,369 = 877,969$.
- Why (1) is wrong: 871,969 = (874 - 3) thousand + 969. It subtracts the carry because the number is below the base. The carry comes from d^2, which is never negative, so it is always added.
- Why (2) is wrong: 874,969 = 874 thousand + 969. It forgets the carry: 3,969 has four digits, but only three fit the base 1,000, and the 3 thousand is lost.
- Why (3) is wrong: 877,609 = 874,000 + 3,609. It squares the deviation wrongly, as $60^2 + 3^2 = 3,609$, and so leaves out the middle term $2 \times 60 \times 3 = 360$.
- The quick tests cannot pick the answer: all four options end in 9 with an even tens digit, all have digital roots allowed for a square (4, 7, 1 and 1), and all lie between $930^2 = 864,900$ and $940^2 = 883,600$. The digital-root check of 2.9 gives 1 for 937^2 (937 gives 19, then 10, then 1, and $1^2 = 1$). So the check removes (1) and (2), but (3) also gives 1. To decide between (3) and (4), do the working. Or use a further point that is not in these notes: write the number as 100a + b, with b its last two digits; then $(100a + b)^2 = 10,000a^2 + 200ab + b^2$, and the first two terms end in 00. So the last two digits of a square depend only on the last two digits of the number. $37^2 = 1,369$ ends in 69, so 937^2 cannot end in 09.

Q2. Answer: (1) 11,449

- Worked solution: 11,449 ends in 49 (even tens digit, allowed) and its digital root is 1 + 1 + 4 + 4 + 9 = 19, then 1 + 9 = 10, then 1 (allowed). The tests cannot confirm it, so square the likely root: 107 = 100 + 7, left part 107 + 7 = 114, right part 7^2 = 49. So 107^2 = 11,449, and 11,449 is a perfect square.
- Why (2) is wrong: 11,866 ends in 6, which a square may do, and its digital root is 4, which is allowed. But a square that ends in 6 has an odd tens digit, and here the tens digit 6 is even. Checking only the last digit and the digital root misses this. (108^2 = 11,664 and 109^2 = 11,881.)
- Why (3) is wrong: 12,261 ends in 61, an allowed ending (last digit 1, even tens digit). But its digital root is 1 + 2 + 2 + 6 + 1 = 12, then 3, and a square's digital root is 1, 4, 7 or 9. Checking only the last two digits misses this. (110^2 = 12,100 and 111^2 = 12,321.)
- Why (4) is wrong: 12,889 passes every quick test: it ends in 89 (even tens digit) and its digital root is 28, then 10, then 1. Taking that as proof is the mistake. By the base method, 113^2 = 126 and 169, carry 1, that is 12,769, and 114^2 = 128 and 196, carry 1, that is 12,996. 12,889 lies between these two consecutive squares, so it is not a square.

Current affairs: the Economic Stabilisation Fund and supplementary demands for grants

Answer key and explanations

Q1. Answer: (3) 3 and 4 only

- Statement 1 is wrong: the excess grant is in Article 115(1)(b), which covers money spent on a service during a financial year in excess of the amount granted for that service and for that year. Article 116 covers the vote on account, the vote of credit and the exceptional grant.
- Statement 2 is wrong: it describes the excess grant. An additional grant, under Article 115(1)(a), is for expenditure on a new service not contemplated in the annual financial statement for that year.
- Statement 3 is correct: Article 116(1)(b) provides for a grant for an unexpected demand upon the resources of India when, because of the magnitude or the indefinite character of the service, the demand cannot be stated with the details ordinarily given in an annual financial statement.
- Statement 4 is correct: this is the supplementary grant of Article 115(1)(a).
- Why the other options are wrong: (1) has the two wrong statements. (2) includes statement 1, which is wrong, and leaves out statement 4. (4) includes statement 2, which is wrong, and leaves out statement 3.

Q2. Answer: (2) 2 only

- Statement 1 is wrong: under Article 267(1) the President makes advances out of the Contingency Fund for unforeseen expenditure pending its authorisation by Parliament by law under Article 115 or 116. The approval comes after the advance.
- Statement 2 is correct: the reported fresh cash provision was Rs 57,381 crore. This is distinct from the announced total fund size of Rs 1 lakh crore, which also uses existing savings.

- Statement 3 is wrong: the Contingency Fund corpus of Rs 30,000 crore is smaller than the ESF fresh cash provision of Rs 57,381 crore. The announced total ESF size of Rs 1 lakh crore is larger still.
- Statement 4 is wrong: demands for grants are voted by the Lok Sabha alone. The Lok Sabha adopted the batch on 13 March 2026; the Rajya Sabha only returned the connected Appropriation Bill, on 17 March 2026.
- Why the other options are wrong: (1) includes statements 1 and 4, which are wrong, and leaves out statement 2. (3) adds statement 3, which is wrong. (4) includes statements 1, 3 and 4, all wrong, and leaves out statement 2.