Day 25 | 20 MCQs with complete explanations

English

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Topics 241–250. Updated 31 October 2026. Pictographs are supplied separately; these notes preserve the full teaching sequence.

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Questions

Topic 241 | Tughlaqs: Muhammad bin Tughlaq's experiments and Firoz Shah

Q1. Match List I (Measure of Muhammad bin Tughlaq) with List II (What the sources say became of it):

List I (Measure)	List II (What became of it)
A. The Khurasan expedition	1. Resented by the nobles, religious men and craftsmen whom it affected most, and later given up
B. The Qarachil expedition	2. Resisted by the peasants, made heavier by a severe drought, and followed by widespread rebellion
C. Daulatabad as a second capital	3. Never carried out; the huge army raised for it was disbanded
D. The higher land revenue demand in the Doab	4. Carried out, but the army was nearly wiped out in the hills and it ended in disaster

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

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

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

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

Q2. Consider the following statements about the Tughlaq period:

1. Firoz Shah Tughlaq exempted the Brahmins from the jizya.
2. Firoz Shah Tughlaq had an Ashokan pillar brought from Topra and set up again in Firozabad, his new city at Delhi.
3. Ibn Battuta served as a qazi of Delhi under Firoz Shah Tughlaq.
4. The Futuhat-i-Firozshahi is a work of Ziauddin Barani.

Which of the statements given above is/are correct?

(1) 1 and 3 only

(2) 2, 3 and 4 only

(3) 1 and 4 only

(4) 2 only

Topic 242 | Andhra Pradesh welfare schemes: purpose, eligibility and delivery accountability

Q1. Consider the following statements about the NTR Bharosa pension scheme of Andhra Pradesh:

1. Under the State Government's memo of September 2026 on new pension applications, an applicant for the disability pension must produce a SADAREM certificate showing a benchmark disability of 40 per cent or more.
2. Under the memo of September 2026, the Mandal Parishad Development Officer or the Municipal Commissioner sanctions a new pension after scrutinising the application.
3. A State Government verification of pension beneficiaries, carried out in one village or ward secretariat in each district and cited by the Sixteenth Finance Commission, found 9 per cent of the beneficiaries ineligible.
4. Under the memo of September 2026, a new pension is paid from the month in which it is sanctioned, and not from an earlier date.

Which of the statements given above is/are correct?

(1) 1 and 2 only

(2) 2, 3 and 4 only

(3) 1, 3 and 4 only

(4) 3 and 4 only

Q2. Match List I (Scheme of the Government of Andhra Pradesh) with List II (Fact about the scheme):

List I (Scheme)	List II (Fact)
A. NTR Bharosa	1. Rs 20,000 per family in 2025-26, released together with a central income-support scheme
B. Stree Shakti	2. Rs 4,000 a month to older persons, widows and fishermen
C. Talliki Vandanam	3. Introduced from 15 August 2025, with Rs 1,420 crore in the Budget 2026-27
D. Annadata Sukhibhava	4. Rs 15,000 a year, with Rs 8,456 crore in the Budget 2026-27

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

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

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

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

Topic 243 | Land reforms: abolition of intermediaries, tenancy and ceilings

Q1. Consider the following statements about land reform measures:

1. Under the ordinary rule in section 4(2) of the A.P. Land Reforms (Ceiling on Agricultural Holdings) Act, 1973, before considering the separate section 4-A provision, a family unit with more than five members has a ceiling not exceeding two standard holdings.
2. Under the same Act, the major sons of an individual are members of his family unit.
3. The Bhoodan movement of Vinoba Bhave had its first success at Mangroth village in Uttar Pradesh.
4. Under Operation Barga in West Bengal, the names of sharecroppers were recorded, and recorded sharecroppers got legal protection against eviction by landlords.

Which of the statements given above is/are correct?

(1) 1 only

(2) 2 and 3 only

(3) 2, 3 and 4 only

(4) 1 and 4 only

Q2. Match List I (Constitutional amendment) with List II (What it did):

List I (Constitutional amendment)	List II (What it did)
A. Constitution (First Amendment) Act, 1951	1. Amended no Article; it added more State land reform Acts to the Ninth Schedule
B. Constitution (Seventeenth Amendment) Act, 1964	2. Omitted Article 31 and sub-clause (f) of Article 19(1)
C. Constitution (Thirty-fourth Amendment) Act, 1974	3. Widened the meaning of “estate” in Article 31A to include land held under ryotwari settlement
D. Constitution (Forty-fourth Amendment) Act, 1978	4. Inserted Article 31B, which protected the 13 land laws then listed in the Ninth Schedule

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

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

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

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

Topic 244 | Literacy in India: levels and regional differences

Q1. Consider the following statements about literacy in India:

1. In the Census, the effective literacy rate takes the total population, including children below seven years of age, as its denominator.
2. In the final figures of Census 2011, none of the four States with the lowest literacy rates was in north-east India.
3. Between the Censuses of 2001 and 2011, female literacy rose by more percentage points than male literacy.
4. In the final figures of Census 2011, the urban literacy rate was more than 25 percentage points above the rural literacy rate.

Which of the statements given above is/are correct?

(1) 3 only

(2) 1 and 3 only

(3) 2 and 4 only

(4) 1, 2 and 4 only

Q2. Consider the following statements about literacy estimates and programmes:

1. In the NSS 75th round (2017-18), the literacy rate of persons aged seven years and above in rural India was below 75 per cent.
2. Under ULLAS, the benchmark for full functional literacy is 95 per cent literacy among persons aged 15 years and above.
3. According to the State Government's Socio-Economic Survey, the 2011 literacy rate of the present State of Andhra Pradesh was below the all-India rate.
4. Under ULLAS, Tripura became the third State to achieve full functional literacy, after Kerala and Mizoram.

Which of the statements given above is/are correct?

(1) 1 and 4 only

(2) 2, 3 and 4 only

(3) 1, 2 and 3 only

(4) 1 and 2 only

Topic 245 | Himalayan rivers: Indus, Ganga and Brahmaputra systems

Q1. Match List I (River) with List II (Where it rises or is formed, as NCERT Class XI gives it):

List I (River)	List II (Where it rises or is formed)
A. Jhelum	1. Raksas Tal, near Mansarovar in Tibet
B. Ravi	2. A spring at Verinag, at the foot of the Pir Panjal
C. Satluj	3. Tandi near Keylong, where the Chandra and the Bhaga join
D. Chenab	4. West of the Rohtang pass, in the Kullu hills

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

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

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

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

Q2. Consider the following statements about the Ganga and Brahmaputra systems:

1. The Pindar joins the Alaknanda at Rudraprayag.
2. The Damodar flows through a rift valley in the Chotanagpur plateau.
3. The Gandak joins the Ganga at Sonpur, near Patna.
4. The Dibang and the Lohit join the Siang or Dihang on its right bank.

Which of the statements given above is/are correct?

(1) 2 and 3 only

(2) 1 and 2 only

(3) 3 and 4 only

(4) 1 and 4 only

Topic 246 | Disaster management: Disaster Management Act 2005 and the institutional framework

Q1. Consider the following statements about the Disaster Management Act, 2005, as amended in 2025:

1. The Urban Disaster Management Authority that a State may constitute for its capital and its cities with a Municipal Corporation is chaired by the District Collector.
2. A State Government may, by notification, constitute a State Disaster Response Force for specialist response to a threatening disaster situation or disaster.
3. Creating a national disaster database is one of the functions of the National Disaster Management Authority.
4. The District Plan must be reviewed and updated at least once in every two years.

Which of the statements given above is/are correct?

(1) 1, 2 and 3 only

(2) 1 and 4 only

(3) 2 and 3 only

(4) 2, 3 and 4 only

Q2. Match List I (body under the Disaster Management Act, 2005) with List II (a feature of its composition under the Act as now amended):

List I (body)	List II (feature of its composition)
A. National Executive Committee	1. The Chief Secretary is its Chief Executive Officer, ex officio
B. State Disaster Management Authority	2. The Director General of Police is a member, ex officio
C. State Executive Committee	3. The Prime Minister is its Chairperson, ex officio
D. National Disaster Management Authority	4. The Chief of the Integrated Defence Staff is a member, ex officio

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

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

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

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

Topic 247 | Artificial intelligence and machine learning

Q1. Match List I (Machine learning term) with List II (Example):

List I (Term)	List II (Example)
A. Supervised learning	1. A spam filter is built from e-mails that people have already marked “spam” or “not spam”
B. Unsupervised learning	2. A shop’s customers are put into groups by their buying habits, with no groups given in advance
C. Reinforcement learning	3. A spam filter sorts the e-mails it was built from almost without a mistake, but sorts new e-mails badly
D. Overfitting	4. A program gets better at a game by trial and error, and is scored on the games it wins

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

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

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

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

Q2. Consider the following statements about artificial intelligence:

1. In Britannica’s account of the goals of AI research, applied AI is the goal that aims to build machines that think.
2. NITI Aayog’s paper on Responsible AI (2021) says that its principles are derived from the Constitution of India and the laws enacted under it.
3. Large language models are typically based on the transformer architecture, which was introduced in 2012 in the paper “Attention Is All You Need”.
4. The OECD’s definition of an AI system (2023) requires that the objectives of the system be stated explicitly.

Which of the statements given above is/are correct?

(1) 1 and 3 only

(2) 3 and 4 only

(3) 1, 2 and 4 only

(4) 2 only

Topic 248 | Classification: odd one out

Q1. Compare the two successive alphabet-position gaps within each letter group. Three groups have equal gaps; which group does not?

(1) DFH

(2) HMR

(3) DHM

(4) LRX

Q2. Three of the following numbers are one more than a perfect square. Which number does not satisfy this rule?

(1) 37

(2) 95

(3) 145

(4) 257

Topic 249 | Data interpretation: pie charts

Q1. Read the table and answer the question. A family uses its monthly income of Rs 54,000 as shown in a pie chart; the sectors are given below as percentages of the income (illustrative figures).

Item	Percentage
Food	35%
House rent	25%
Children's education	15%
Transport	10%
Medical	5%
Savings	10%

How much more does the family spend each month on food than on children's education?

(1) Rs 3,000

(2) Rs 5,400

(3) Rs 8,100

(4) Rs 10,800

Q2. Read the table and answer the question. A State's development spending is shown in two pie charts, one for each year; the central angles are given below (illustrative figures). Total spending was Rs 480 crore in 2024-25 and Rs 600 crore in 2025-26.

Sector	Central angle, 2024-25	Central angle, 2025-26
Agriculture	90°	63°
Health	54°	72°
Education	90°	90°
Roads	72°	81°
Others	54°	54°

By what per cent did the amount spent on agriculture fall from 2024-25 to 2025-26 (correct to one decimal place)?

(1) 12.5%

(2) 14.3%

(3) 30.0%

(4) 87.5%

Topic 250 | Current affairs: Chabahar port and India's connectivity with Iran and Central Asia

Q1. Consider the following statements about India’s role at Chabahar port:

1. India Ports Global Chabahar Free Zone, a special purpose vehicle of India Ports Global Limited, took over the interim operation of a part of Shahid Beheshti port with effect from 24 December 2018.
2. The long-term main contract of 13 May 2024 for the Shahid Beheshti terminal was signed between India Ports Global Limited and Iran’s Ministry of Roads and Urban Development.
3. The bilateral contract of 23 May 2016 for equipping, mechanising and starting operations at Shahid Beheshti port (Phase I) had a total value of USD 85 million.
4. India Ports Global Limited, the special purpose vehicle based in Mumbai, was incorporated under the Ministry of External Affairs.

Which of the statements given above is/are correct?

(1) 1 only

(2) 1 and 3 only

(3) 2 and 4 only

(4) 2, 3 and 4 only

Q2. Match List I (places on routes linked with India’s connectivity through Iran) with List II (what the official sources record about each):

List I	List II
A. Bandar Abbas	1. One end of the planned rail line for which IRCON signed a memorandum of understanding with CDTIC in May 2016
B. Zahedan	2. The Iranian port at which both 2014 INSTC dry-run routes entered Iran
C. Astrakhan	3. The end-point of the 2014 INSTC dry-run route that ran on through Tehran and Bandar Anzali
D. Baku	4. The venue of the fifth INSTC Coordination Council meeting (2013), which recommended the dry run

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

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

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

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

Answer key and detailed explanations

Topic 241 | Tughlaqs: Muhammad bin Tughlaq's experiments and Firoz Shah

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

- A-3: the Khurasan expedition, planned in 1327-28, never took place. NCERT says he gave up the plan to invade Transoxiana and disbanded his large army.
- B-4: the Qarachil expedition did set out, into the hills of Garhwal-Kumaon; Britannica says it ended in disaster, and Wikipedia says almost the whole army was lost.
- C-1: making Daulatabad a second capital moved mainly nobles, religious men and craftsmen (NIOS); NCERT says the shift was resented, and the Sultan later gave Daulatabad up.
- D-2: the higher demand in the Doab was resisted by the peasants and came with a severe drought (Britannica); NCERT says higher taxes and famine in the Ganga-Yamuna belt led to widespread rebellion.
- Why (1) is wrong: it swaps the two expeditions. It is the Khurasan expedition that never took place and the Qarachil expedition that ended in disaster in the hills.
- Why (3) is wrong: it swaps the two expeditions and also gives the peasants' resistance to Daulatabad and the resentment of the nobles and craftsmen to the Doab measure.
- Why (4) is wrong: it gets the expeditions right but swaps Daulatabad and the Doab measure. The capital affected the nobles, religious men and craftsmen who were moved; the land revenue demand fell on the peasants.

Q2. Answer: (4) 2 only

- Statement 1 is wrong: Britannica says he refused to exempt the Brahmins from the jizya; the Brahmins of Delhi protested with a hunger strike.
- Statement 2 is correct: the pillar from Topra, in present-day Yamunanagar district of Haryana, was set up again at Firozabad, now Kotla Firoz Shah, in 1356. A second pillar came from Meerut and was set up on the Ridge.
- Statement 3 is wrong: Ibn Battuta reached India in 1333 and was made a qazi of Delhi by Muhammad bin Tughlaq. He left Delhi as the Sultan's envoy to China in 1342 (NCERT), about ten years before Firoz came to the throne.
- Statement 4 is wrong: the Futuhat-i-Firozshahi is Firoz Shah's own account of his reign. Barani's works are the Tarikh-i-Firoz Shahi and the Fatawa-i-Jahandari.
- Why the other options are wrong: (1) has statements 1 and 3, both wrong, and leaves out statement 2. (2) has statement 2 but adds statements 3 and 4, both wrong. (3) has statements 1 and 4, both wrong, and leaves out statement 2.

Topic 242 | Andhra Pradesh welfare schemes: purpose, eligibility and delivery accountability

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

- Statement 1 is correct: the memo requires a SADAREM certificate showing a benchmark disability of 40 per cent or more for the disability pension.
- Statement 2 is wrong: the MPDO or the Municipal Commissioner only scrutinises the application and recommends. The memo says, "The MPDO shall not give any sanctions." The final validation is by the CEO of SERP; SERP issues the sanction, subject to Government approval and budget.
- Statement 3 is correct: the verification, done in one village or ward secretariat in each district, found 9 per cent of beneficiaries ineligible and wrongly included, and 0.6 per cent dead (Sixteenth Finance Commission, quoted by PRS).
- Statement 4 is correct: under the memo, pensions start from the month of sanction and are not paid retrospectively.
- Why the other options are wrong: (1) and (2) contain statement 2, which is wrong; (1) also leaves out statements 3 and 4, and (2) leaves out statement 1, all correct. (4) leaves out statement 1, which is correct.

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

- Why it is correct: the NTR Bharosa scheme pays Rs 4,000 a month to older persons, widows, fishermen and other listed groups, under G.O.Ms.No.43 of 13 June 2024 (A-2). Stree Shakti, free bus travel for women, was introduced from 15 August 2025, and the Budget 2026-27 gives it Rs 1,420 crore (B-3). Talliki Vandanam gives Rs 15,000 a year for school-going children of classes 1 to 12, and the Budget 2026-27 gives it Rs 8,456 crore (C-4). Annadata Sukhibhava was released together with PM-KISAN, the central income-support scheme, as Rs 20,000 per farmer family in 2025-26 (D-1).
- Why (2) is wrong: it exchanges Stree Shakti and Talliki Vandanam: the scheme introduced from 15 August 2025 with Rs 1,420 crore is Stree Shakti, and the Rs 15,000 a year with Rs 8,456 crore is Talliki Vandanam.
- Why (3) is wrong: it exchanges NTR Bharosa and Annadata Sukhibhava: the monthly Rs 4,000 is the NTR Bharosa pension, and the Rs 20,000 per family released together with PM-KISAN is Annadata Sukhibhava.
- Why (4) is wrong: it makes both exchanges, so all four of its pairs are wrong.

Topic 243 | Land reforms: abolition of intermediaries, tenancy and ceilings

Q1. Answer: (4) 1 and 4 only

- Statement 1 is correct as expressly limited to the ordinary section 4(2) rule, before the separate section 4-A provision: a family unit of more than five members gets one standard holding plus one-fifth of a standard holding for each member above five, but the total shall not exceed two standard holdings.
- Statement 2 is wrong: the family unit is the individual, the spouse or spouses, their minor sons and their unmarried minor daughters. Major sons are not members of it; where they hold less than the ceiling, the Act allows the family's ceiling to be increased (section 4-A).
- Statement 3 is wrong: Bhoodan had its first success on 18 April 1951 at Pochampally in Nalgonda district, where V. Ramachandra Reddy offered 100 acres. Mangroth in Uttar Pradesh was a Gramdan village, given whole to Vinoba in May 1952.
- Statement 4 is correct: Operation Barga (1978) recorded the names of the bargadars, and a recorded bargadar got legal protection against eviction by the landlord.
- Why the other options are wrong: (1) leaves out statement 4, which is correct. (2) and (3) contain statements 2 and 3, which are wrong.

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

- A-4: the First Amendment (enacted on 18 June 1951) inserted Article 31B, which protects the laws in the Ninth Schedule; the first Ninth Schedule listed 13 land laws. It also inserted Article 31A.
- B-3: the 17th Amendment (in force from 20 June 1964) widened the meaning of "estate" in Article 31A to include land held under ryotwari settlement. It also placed 44 more land laws in the Ninth Schedule.
- C-1: the 34th Amendment (in force from 7 September 1974) amended no Article. It only placed 20 more State land laws in the Ninth Schedule.
- D-2: the 44th Amendment omitted Article 31 and sub-clause (f) of Article 19(1), from 20 June 1979. The right to property now stands in Article 300A.
- Why (1) is wrong: it exchanges the First and the 44th Amendments. The First Amendment added protection for the land laws; the 44th took the right to property out of Part III.
- Why (3) is wrong: it exchanges the 17th and the 34th Amendments. The 17th widened "estate" in Article 31A; the 34th amended no Article at all.
- Why (4) is wrong: it makes both exchanges.

Topic 244 | Literacy in India: levels and regional differences

Q1. Answer: (1) 3 only

- Statement 1 is wrong: the effective literacy rate uses the population aged seven and above as its denominator. A rate that takes the total population, including children below seven, is the crude literacy rate.
- Statement 2 is wrong: Arunachal Pradesh, in the north-east, was the second lowest State (65.4 per cent, final), after Bihar (61.8). Rajasthan (66.1) and Jharkhand (66.4) followed.
- Statement 3 is correct: female literacy rose by 11.79 percentage points and male literacy by 6.88 points in 2001 to 2011, so the gender gap narrowed.
- Statement 4 is wrong: the final urban rate was 84.1 per cent and the rural rate 67.8 per cent, a gap of 16.3 points.
- Why the other options are wrong: (2) has statement 1, which is wrong. (3) has statements 2 and 4, which are wrong, and leaves out statement 3. (4) has statements 1, 2 and 4, all wrong, and leaves out statement 3.

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

- Statement 1 is correct: in the NSS 75th round (July 2017 to June 2018), the rural literacy rate of persons aged seven and above was 73.5 per cent, below 75 per cent; the urban rate was 87.7 per cent. The rural figure of 77.5 per cent belongs to a later survey, the PLFS of 2023-24.
- Statement 2 is correct: the Ministry of Education uses the "nationally prescribed benchmark of 95% literacy among individuals aged 15 years and above."
- Statement 3 is correct: the AP Socio-Economic Survey 2024-25 gives 67.35 per cent for the State in 2011, lower than the all-India rate of 72.98 per cent.
- Statement 4 is wrong: Tripura became the third State on 23 June 2025, after Mizoram and Goa, not after Kerala and Mizoram.
- Why the other options are wrong: (1) has statement 4, which is wrong, and leaves out statements 2 and 3. (2) has statement 4 and leaves out statement 1. (4) leaves out statement 3, which is correct.

Topic 245 | Himalayan rivers: Indus, Ganga and Brahmaputra systems

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

- Why it is correct: the Jhelum rises from a spring at Verinag, at the foot of the Pir Panjal (A-2). The Ravi rises west of the Rohtang pass in the Kullu hills of Himachal Pradesh (B-4). The Satluj rises in Raksas Tal near Mansarovar in Tibet, at 4,555 m, and enters India through Shipki La (C-1). The Chenab is formed by the Chandra and the Bhaga, which join at Tandi near Keylong (D-3).
- Why (1) is wrong: it exchanges the Jhelum and the Ravi. The Jhelum rises from a spring at Verinag in Kashmir; the Ravi rises west of the Rohtang pass in the Kullu hills of Himachal Pradesh.
- Why (4) is wrong: it exchanges the Satluj and the Chenab. The Satluj rises in Raksas Tal in Tibet and enters India at Shipki La, while the Chenab is formed at Tandi by the Chandra and the Bhaga.
- Why (3) is wrong: it makes both exchanges, so none of its four pairs is right.

Q2. Answer: (1) 2 and 3 only

- Statement 1 is wrong: the Pindar joins the Alaknanda at Karnaprayag. At Rudraprayag it is the Mandakini that joins.
- Statement 2 is correct: NCERT says the Damodar occupies the eastern margins of the Chotanagpur plateau and flows through a rift valley before joining the Hooghly.
- Statement 3 is correct: the Gandak rises in the Nepal Himalayas and joins the Ganga at Sonpur, near Patna.
- Statement 4 is wrong: the Dibang and the Lohit join the Siang or Dihang on its left bank; after that the river is called the Brahmaputra. The Subansiri, Kameng, Manas and Sankosh are the right-bank tributaries.
- Why the other options are wrong: (2) includes statement 1, which is wrong, and leaves out statement 3. (3) includes statement 4, which is wrong, and leaves out statement 2. (4) includes statements 1 and 4, which are both wrong.

Topic 246 | Disaster management: Disaster Management Act 2005 and the institutional framework

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

- Statement 1 is wrong: under section 41A the Municipal Commissioner is the Chairperson of the Urban Disaster Management Authority. The District Collector is its Vice-Chairperson.
- Statement 2 is correct: section 44A, inserted in 2025, lets a State Government constitute a State Disaster Response Force by notification, for specialist response to a threatening disaster situation or disaster.
- Statement 3 is correct: since 2025, section 6(2) lists creating a national disaster database among the NDMA's functions.
- Statement 4 is correct: since 2025, section 31(4) says the District Plan shall be reviewed and updated at least once in every two years or earlier as necessary. Before that it was every year.
- Why the other options are wrong: (1) and (2) include statement 1, which is wrong; (2) also leaves out statements 2 and 3, and (1) leaves out statement 4. (3) leaves out statement 4, which is correct.

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

- A-4: section 8 makes the Chief of the Integrated Defence Staff of the Chiefs of Staff Committee an ex officio member of the National Executive Committee, along with the Secretaries of the listed ministries.
- B-1: section 14(4) makes the Chairperson of the State Executive Committee the Chief Executive Officer of the SDMA, ex officio, and section 20 makes the Chief Secretary that Chairperson. So the Chief Secretary is the SDMA's Chief Executive Officer.
- C-2: the 2025 amendment added the Director General of Police of the State to the State Executive Committee as an ex officio member (section 20(2)(c)).
- D-3: section 3 makes the Prime Minister the Chairperson of the NDMA, ex officio.
- Why (1) is wrong: it exchanges the two national bodies. The Prime Minister chairs the NDMA, not the NEC; the Chief of the Integrated Defence Staff sits on the NEC.
- Why (2) is wrong: it exchanges the two State bodies. The Chief Secretary chairs the State Executive Committee and through that becomes the SDMA's Chief Executive Officer; the Director General of Police sits on the State Executive Committee.
- Why (4) is wrong: it makes both exchanges.

Topic 247 | Artificial intelligence and machine learning

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

- A-1: supervised learning works with training data that holds both the inputs and the desired outputs, the labels. The e-mails already marked “spam” or “not spam” are labelled examples, and the spam filter is the standard example.
- B-2: unsupervised learning works with data that has not been labelled, classified or categorised, and finds structure in it by itself. Grouping customers by buying habits when no groups are given (customer segmentation) is cluster analysis.
- C-4: in reinforcement learning an agent acts in an environment, learns by trial and error and tries to maximise its rewards; in the game, the wins are the rewards.
- D-3: overfitting is a model that fits its training data so closely that it does badly on data it has not seen; a filter that sorts its own training e-mails well but new e-mails badly has overfitted (Section 3, step 6).
- Why (2) is wrong: it exchanges unsupervised and reinforcement learning. Neither example uses labelled target answers, but grouping customers with no groups given is unsupervised learning, and learning a game by trial and error, scored on wins, is reinforcement learning.
- Why (3) is wrong: it makes both exchanges. It gives the filter built from marked e-mails to overfitting and the filter that fails on new e-mails to supervised learning, and it also exchanges unsupervised and reinforcement learning.
- Why (4) is wrong: it exchanges supervised learning and overfitting. Building a filter from marked e-mails is supervised learning; doing well on the training e-mails but badly on new ones is overfitting.

Q2. Answer: (4) 2 only

- Statement 1 is wrong: in Britannica’s account it is artificial general intelligence (strong AI) that aims to build machines that think. Applied AI aims at commercially viable “smart” systems, such as expert medical diagnosis systems.
- Statement 2 is correct: NITI Aayog’s Responsible AI paper of February 2021 says its seven principles are derived from the Constitution of India and the laws enacted under it.
- Statement 3 is wrong: large language models are typically based on the transformer architecture, but the paper “Attention Is All You Need” introduced it in 2017. The year 2012 belongs to AlexNet, the deep convolutional neural network that won the ImageNet contest.
- Statement 4 is wrong: the OECD definition covers a system that works “for explicit or implicit objectives”, so the objectives need not be stated explicitly.
- Why the other options are wrong: (1) includes statements 1 and 3, which are wrong, and leaves out statement 2. (2) includes statements 3 and 4, which are wrong, and leaves out statement 2. (3) includes statement 2 but also statements 1 and 4, which are wrong.

Topic 248 | Classification: odd one out

Q1. Answer: (3) DHM

- Positions: DFH is 4, 6, 8, gaps +2, +2. HMR is 8, 13, 18, gaps +5, +5. DHM is 4, 8, 13, gaps +4, +5. LRX is 12, 18, 24, gaps +6, +6.
- In DFH, HMR and LRX the two gaps are equal. In DHM they are not, so DHM is the odd one out.
- The following alternative checks do not isolate another group: none has a vowel; all four are in alphabetical order; none holds a pair of opposite letters; DFH and DHM lie wholly in A to M while HMR and LRX do not (two and two); DFH and LRX have only even positions while HMR and DHM do not (two and two).
- Why (1) is wrong: DFH comes from taking D as 3 (the place of C). Then DFH looks like +3, +2 and DHM like +5, +5. D is 4 (the table in 2.4).
- Why (2) is wrong: HMR comes from taking M as 12 (the place of L). Then HMR looks like +4, +6 and DHM like +4, +4. M is 13 (the table in 2.4).
- Why (4) is wrong: LRX has the largest gaps. A candidate who takes the size of the gap as the rule picks it, but every group has a different gap size, so size picks out none of them. The rule is that the two gaps are equal.

Q2. Answer: (2) 95

- $37 = 36 + 1 = 6^2 + 1$. $145 = 144 + 1 = 12^2 + 1$. $257 = 256 + 1 = 16^2 + 1$. Each is 1 more than a square.
- $95 - 1 = 94$, which is not a square: $9^2 = 81$ and $10^2 = 100$. So 95 is the odd one out.
- The following alternative checks do not isolate another number: all four are odd; 37 and 257 are prime while $95 = 5 \times 19$ and $145 = 5 \times 29$ are not (two and two); 95 and 145 are divisible by 5 (two and two); the digit sums are 10, 14, 10, 14 (two and two); none is a square or a cube.
- Why (1) is wrong: 37 is picked by a candidate who tests “prime” and wrongly takes 257 to be composite, so that 37 looks like the only prime. By the square-root test, 257 is less than 289 ($= 17^2$) and none of 2, 3, 5, 7, 11 and 13 divides it, so 257 is prime and the prime rule splits the set two and two.
- Why (3) is wrong: 145 is picked by a candidate who does not recall $12^2 = 144$ from the table of squares in Topic 148. He sees $37 = 6^2 + 1$ and $257 = 16^2 + 1$, takes 145 as the one that fits no pattern, and does not check that 95 is not 1 more than a square either (step 2 of 2.6).
- Why (4) is wrong: 257 is picked by a candidate who does not recall $16^2 = 256$ from the same table. He sees $37 = 6^2 + 1$ and $145 = 12^2 + 1$, takes 257 as the one that fits no pattern, and does not check that 95 is not 1 more than a square either (step 2 of 2.6).

Topic 249 | Data interpretation: pie charts

Q1. Answer: (4) Rs 10,800

- Worked solution: the percentages add up to 35 + 25 + 15 + 10 + 5 + 10 = 100. Food is 35% and children's education 15%, so the difference is 20% of the income. Value = 20/100 × 54,000 = Rs 10,800.
- Check: food = 35/100 × 54,000 = Rs 18,900; education = 15/100 × 54,000 = Rs 8,100; 18,900 - 8,100 = Rs 10,800.
- Why (1) is wrong: Rs 3,000 = 20/360 × 54,000. It divides the percentage by 360, treating it as an angle. The sectors here are given as percentages, so the divisor is 100.
- Why (2) is wrong: Rs 5,400 = 10/100 × 54,000. It uses the wrong sector: food minus house rent (35% - 25%), not food minus children's education.
- Why (3) is wrong: Rs 8,100 = 15/100 × 54,000. It finds the value of the education sector alone, not the difference between food and education.

Q2. Answer: (1) 12.5%

- Worked solution: the angles of each year add up to 360°. Agriculture in 2024-25 = 90/360 × 480 = Rs 120 crore. Agriculture in 2025-26 = 63/360 × 600 = Rs 105 crore. Fall = 120 - 105 = 15 crore. The base is the earlier year, 120. Percentage fall = 15/120 × 100 = 12.5%.
- Check by factors: new value ÷ old value = 63/90 × 600/480 = 0.7 × 1.25 = 0.875, that is, a fall of 12.5%.
- Why (2) is wrong: 14.3% = 15/105 × 100. It divides the fall by the later year's value. A percentage change is measured against the earlier value.
- Why (3) is wrong: 30.0% = (90 - 63)/90 × 100. It compares the two angles (25% and 17.5% of the whole) as if the totals were the same. The total rose from Rs 480 crore to Rs 600 crore, so the value fell much less than the angle.
- Why (4) is wrong: 87.5% = 105/120 × 100. It gives the later amount as a percentage of the earlier one (the factor 0.875 above), not the fall. The fall is 100 - 87.5 = 12.5%.

Topic 250 | Current affairs: Chabahar port and India's connectivity with Iran and Central Asia

Q1. Answer: (2) 1 and 3 only

- Statement 1 is correct: the Ministry's answer in the Lok Sabha (January 2019) says that IPGCFZ, the SPV of IPGL in Iran, took over the interim operation of the port with effect from 24 December 2018.
- Statement 2 is wrong: the contract was signed between IPGL and the Ports and Maritime Organisation of Iran. Iran's Minister of Roads and Urban Development met the Indian Minister that day, but his Ministry was not the party to the contract.
- Statement 3 is correct: the Ministry (January 2021) says the bilateral contract of 23 May 2016 was signed with a total value of USD 85 million, for equipping, mechanising and starting operations at Shahid Beheshti port (Chabahar development, Phase I).
- Statement 4 is wrong: the Ministry (January 2021) says IPGL, a Mumbai-based SPV, was incorporated under the Union shipping ministry (now the Ministry of Ports, Shipping and Waterways). IPGL was not established under the Ministry of External Affairs.
- Why the other options are wrong: (1) leaves out statement 3, which is correct. (3) has statements 2 and 4, both wrong. (4) has statements 2 and 4, both wrong. A candidate who knows only that statements 2 and 4 are wrong is left with (1) and (2), and must still judge statement 3.

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

- Why it is correct: both 2014 dry-run routes went from Nhava Sheva to Bandar Abbas; so both routes entered Iran at Bandar Abbas (A-2). The rail line for which IRCON signed an MoU with Iran's CDTIC on 23 May 2016 runs from Chabahar to Zahedan (B-1). The route through Tehran and Bandar Anzali ended at Astrakhan in Russia (C-3). The fifth meeting of the INSTC Coordination Council, which recommended the dry run, was held at Baku in Azerbaijan in 2013 (D-4).
- Why (1) is wrong: it exchanges Bandar Abbas and Zahedan. Zahedan is the end of the planned rail line from Chabahar; both dry-run routes entered Iran at Bandar Abbas.
- Why (2) is wrong: it makes the same exchange of Bandar Abbas and Zahedan, and also exchanges Astrakhan and Baku. The route through Bandar Anzali ended at Astrakhan, and the Coordination Council met at Baku.
- Why (4) is wrong: it exchanges Astrakhan and Baku. The route through Tehran and Bandar Anzali ended at Astrakhan; the 2013 meeting that recommended the dry run was held at Baku, where the other route ended.