IAS WITH DR RAVI
AIM. PREPARE. ACHIEVE

Day 33
20 MCQs and Explanations

APPSC Group 1
1,000 Topics in 100 Days

Topics 321–330

Topic 321

Sardar Patel and integration of princely states: methods and selected cases

MCQs

Q1. Match List I (Princely state) with List II (How it joined India) and select the correct answer using the code given below the lists:

List I (**Princely state**)	**List II** (**How it joined India**)
A. Hyderabad	1. A Merger Agreement signed by its ruler in September 1949
B. Jammu and Kashmir	2. A plebiscite held in February 1948
C. Junagadh	3. A police action, Operation Polo, in September 1948
D. Manipur	4. An Instrument of Accession to India signed in October 1947

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

Q2. Consider the following statements about the integration of the princely states:

1. The States Department of the Government of India, set up in July 1947, had V.P. Menon as its secretary.
2. The Patiala and East Punjab States Union (PEPSU) was formally inaugurated in July 1948.
3. Under the Instrument of Accession, an acceding state handed over four subjects to the Dominion of India: defence, external affairs, communications and finance.
4. The privy purses paid to the former rulers were ended by the Constitution (Twenty-sixth Amendment) Act, 1971.

Which of the statements given above is/are correct?

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

Answer key and explanations

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

- A-3: Hyderabad joined after the police action, Operation Polo, in September 1948. in September 1948 the Indian army moved in, and after a few days the Nizam surrendered. Hyderabad's earlier agreement with India, in November 1947, was a Standstill Agreement, not an Instrument of Accession.
- B-4: Maharaja Hari Singh signed Jammu and Kashmir's Instrument of Accession to India in October 1947 (dated 26 October; accepted by Mountbatten on 27 October). Kashmir did not join through a police action.
- C-2: In Junagadh the Nawab had announced accession to Pakistan; A plebiscite confirmed the people's wish to join India. It was held in February 1948. Junagadh was later merged into Saurashtra (completed in January 1949), but there was no Merger Agreement signed by its ruler in September 1949: the Nawab had fled to Karachi in 1947.
- D-1: The Government of India pressured the Maharaja of Manipur into signing a Merger Agreement in September 1949. Manipur had held elections in June 1948, but that was an election under universal adult franchise, not a plebiscite on joining India.
- Why the other options are wrong: (1) exchanges both Hyderabad with Kashmir and Junagadh with Manipur. (3) gets Junagadh and Manipur right but exchanges Hyderabad and Kashmir. (4) gets Hyderabad and Kashmir right but exchanges Junagadh and Manipur.

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

- Statement 1 is correct: the States Department was established on 5 July 1947. Patel was its political head and V.P. Menon its Secretary, that is, its administrative head, from 1947 to 1951.
- Statement 2 is correct: PEPSU, a union of eight princely states, was formed on 5 May 1948 and formally inaugurated on 15 July 1948.
- Statement 3 is wrong: the Instrument of Accession handed over three subjects, defence, external affairs and communications, with a few ancillary matters. Finance was not one of them; the ruler kept the subjects not handed over.
- Statement 4 is correct: the Constitution (Twenty-sixth Amendment) Act, 1971 ended the privy purses, and the former rulers ceased to be recognised as rulers.
- Why the other options are wrong: (1) and (2) include statement 3, which is wrong; (2) also leaves out statement 2. (3) leaves out statements 1 and 2, which are correct.

Topic 322

Imperial Cholas: Rajaraja I and Rajendra I

MCQs

Q1. Consider the following pairs of Chola achievements and the Chola rulers credited with them:

Achievement	Chola ruler
1. Completing the conquest of Sri Lanka	Rajaraja I
2. Capture of the Kaveri delta from the Muttaraiyar	Vijayalaya
3. Northern expedition that reached the Ganga	Kulottunga I
4. Naval expedition against Srivijaya in Southeast Asia	Rajaraja I

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 Great Living Chola Temples:

1. the Brihadisvara temple at Thanjavur was consecrated in 1009-10.
2. the Airavatesvara temple at Darasuram was built by Rajaraja I.
3. All three temples were placed on the World Heritage List in the same year.
4. The temple at Gangaikondacholapuram was completed in 1035.

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

Answer key and explanations

Q1. **Answer**: (1) **Only one pair**

- Pair 1 is wrong: Rajendra I "completed the conquest of Sri Lanka", capturing the Sinhalese king Mahinda V. Rajaraja I had acquired only northern Sri Lanka, by 996, after his army sacked Anuradhapura in 993. The real partner of this achievement is Rajendra I; Rajaraja I belongs with the conquest of the north.
- Pair 2 is correct: Vijayalaya, of the ancient Chola family of Uraiyur, captured the Kaveri delta from the Muttaraiyar in the middle of the ninth century and built the town of Thanjavur.
- Pair 3 is wrong: the expedition that reached the Ganga was Rajendra I's (1023); he "raided the Ganga valley". Kulottunga I, who took the Chola throne in 1070, belongs instead with the joining of the Chola and Eastern Chalukya crowns. He was born Rajendra, do not confuse the two rulers.
- Pair 4 is wrong: Rajendra I led the Srivijaya naval expedition. In 1025 the Cholas seized Palembang and captured its king; Rajendra also conquered parts of the Malay Peninsula and Archipelago. Rajaraja's earlier naval campaigns concerned the Maldives, Malabar coast and northern Sri Lanka.
- Count: only pair 2 is correct, so only one pair is correctly matched.
- Why (2) is wrong: a candidate reaches "only two" by giving the whole of Sri Lanka to Rajaraja I, because his armies took the north and sacked Anuradhapura. He then accepts pair 1 as well as pair 2.
- Why (3) is wrong: a candidate reaches "only three" by making that mistake and also giving the Srivijaya expedition to Rajaraja I, the king whose naval campaigns took the Maldive Islands, the Malabar coast and northern Sri Lanka. He then accepts pairs 1, 2 and 4.
- Why (4) is wrong: a candidate reaches "all four" by making both those mistakes and also taking Kulottunga I, born Rajendra and called "Rajendra II", for Rajendra I, the leader of the Ganga expedition.

Q2. **Answer**: (3) 1 **and** 4 **only**

- Statement 1 is correct: Rajaraja I consecrated the temple in "the 25th regal year (1009-1010 CE)". Construction began about 1003 and was completed about seven years later.
- Statement 2 is wrong: the Airavatesvara temple at Darasuram "was built by the Chola king Rajaraja II (1143-1173 CE.)", more than a century after Rajaraja I.
- Statement 3 is wrong: the Brihadisvara at Thanjavur was inscribed in 1987; the temples at Gangaikondacholapuram and Darasuram were added in 2004.
- Statement 4 is correct: the temple at Gangaikondacholapuram, built by Rajendra I, was completed in 1035.

- Why the other options are wrong: (1) includes statement 3, which is wrong, and leaves out statement 4. (2) includes statement 2, which is wrong, and leaves out statement 1. (4) includes both wrong statements, 2 and 3, and leaves out both correct ones.

Topic 323

Fundamental Duties: Article 51A

MCQs

Q1. Consider the following statements about Article 51A of the Constitution of India:

1. Clause (k), on a parent or guardian providing opportunities for education to a child or ward between the age of six and fourteen years, was added by the Constitution (Eighty-sixth Amendment) Act, 2002.
2. The Constitution makes the enjoyment of rights conditional upon the fulfilment of duties.
3. The duty to renounce practices derogatory to the dignity of women stands in the same clause as the duty to promote harmony and the spirit of common brotherhood.
4. Part IVA, which contains Article 51A, came into force on 3 January 1977.

Which of the statements given above is/are correct?

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

Q2. Consider the following statements about how Article 51A has been used and given effect:

1. The Supreme Court has held that the Fundamental Duties are enforceable by a writ of court in the same way as the Fundamental Rights.
2. In AIIMS Students' Union v. AIIMS (2001), the Supreme Court relied on the duty to strive towards excellence to uphold the institutional reservation of seats for AIIMS's own students.
3. The laws that the Attorney General for India listed in a written note to the Supreme Court as bearing on the Fundamental Duties were all made after 1976.
4. In M.C. Mehta v. Union of India (1988), the Supreme Court cited clause (g) of Article 51A and directed the Central Government to have educational institutions teach lessons on the protection of the natural environment for at least one hour a week.

Which of the statements given above is/are correct?

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

Answer key and explanations

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

- Statement 1 is correct: clause (k) was inserted by section 4 of the Eighty-sixth Amendment Act, 2002, with effect from 1 April 2010. Its words are "who is a parent or guardian to provide opportunities for education to his child or, as the case may be, ward between the age of six and fourteen years."
- Statement 2 is wrong: enjoyment of Fundamental Rights is not dependent on fulfilment of duties. Adding the duties did not change the status of Fundamental Rights.
- Statement 3 is correct: both duties are in clause (e), which first asks citizens to promote harmony and the spirit of common brotherhood transcending religious, linguistic and regional or sectional diversities, and then "to renounce practices derogatory to the dignity of women".
- Statement 4 is correct: Part IVA was inserted by section 11 of the Forty-second Amendment Act, 1976, with effect from 3 January 1977. The amendment was of 1976; the Part took effect in January 1977.
- Why the other options are wrong: (1) includes statement 2, which is wrong, and leaves out statement 4. (2) leaves out statement 4, which is correct. (4) includes statement 2, which is wrong, and leaves out statements 1 and 3.

Q2. **Answer**: (2) 4 **only**

- Statement 1 is wrong: in AIIMS Students' Union the Court said "Fundamental duties, as defined in Article 51A, are not made enforceable by a writ of court". They are a guide and aid to interpretation, not rights that a writ enforces.
- Statement 2 is wrong: the Court used the duty to strive towards excellence the other way. It tested the reservation against that goal and struck down the institutional reservation as violating Article 14.
- Statement 3 is wrong: the note lists the Prevention of Insults to National Honour Act, 1971 against clause (a) and the Wild Life (Protection) Act, 1972 against clause (g). Both are older than Part IVA. It also lists the Ancient Monuments and Archaeological Sites and Remains Act, 1958.
- Statement 4 is correct: on 12 January 1988, citing "Clause (g) of Article 51A", the Court directed the Central Government to have educational institutions throughout India teach lessons on the protection of the natural environment for at least one hour a week in the first ten classes.
- Why the other options are wrong: (1) is made up of two wrong statements and leaves out statement 4. (3) includes statement 2, which is wrong. (4) is made up of the three wrong statements.

Topic 324

India and the WTO: agreements and disputes

MCQs

Q1. Match List I (WTO agreement) with List II (A feature of the agreement, as the WTO describes it):

List I (**WTO agreement**)	**List II** (**A feature of the agreement**, **as the WTO describes it**)
A. Agreement on Trade-Related Investment Measures (TRIMS)	1. Allows temporary precautionary steps where there is scientific uncertainty
B. General Agreement on Trade in Services (GATS)	2. Its illustrative list includes rules that require an enterprise to buy or use products of domestic origin
C. Sanitary and Phytosanitary (SPS) Agreement	3. Covers a foreign company setting up subsidiaries or branches in another country, as one of four modes of supply
D. Technical Barriers to Trade (TBT) Agreement	4. Sets out a code of good practice for government and non-governmental bodies that prepare, adopt and apply voluntary standards

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

Q2. Consider the following statements about India and the WTO:

1. In the ICT tariffs dispute brought by the European Union (DS582), the panel held that India's tariff commitments on these goods were set by the Information Technology Agreement rather than by India's WTO Schedule.
2. In the sugar dispute brought by Brazil (DS579), India notified an appeal to the Appellate Body after the panel report of December 2021.
3. A decision of the WTO's General Council in 2014 confirmed that the interim peace clause for public stockholding, agreed at Bali in 2013, would remain in force until a permanent solution is agreed.
4. India became a member of the GATT only when the WTO came into being in 1995.

Which of the statements given above is/are correct?

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

Answer key and explanations

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

- Why it is correct: the TRIMS covers investment measures related to trade in goods, and its illustrative list includes local content rules, which require an enterprise to buy or use products of domestic origin (A-2). The GATS defines four modes of supply, and Mode 3, commercial presence, is a foreign company setting up subsidiaries or branches to provide services in another country (B-3). Article 5.7 of the SPS Agreement allows temporary precautionary steps to deal with scientific uncertainty (C-1). The TBT Agreement sets out a code of good practice for governments and non-governmental or industry bodies that prepare, adopt and apply voluntary standards (D-4).
- Why (1) is wrong: it exchanges both pairs, so all four matches are wrong.
- Why (2) is wrong: it exchanges TRIMS and GATS. Setting up a branch to supply a service is Mode 3 of the GATS; the TRIMS applies to investment measures related to trade in goods only, and it is the TRIMS list that names local content rules.
- Why (3) is wrong: it exchanges SPS and TBT. The precautionary provision is Article 5.7 of the SPS Agreement; the code of good practice for voluntary standards belongs to the TBT Agreement.

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

- Statement 1 is wrong: the panel held the opposite. It found that India's tariff commitments are set out in its WTO Schedule, not in the ITA, and that the ITA is not a covered agreement.
- Statement 2 is correct: the panel report was circulated on 14 December 2021, and India notified its appeal to the Appellate Body on 24 December 2021.
- Statement 3 is correct: the General Council decision of 2014 confirmed that the interim solution agreed at Bali in 2013 would remain in force until a permanent solution is agreed.
- Statement 4 is wrong: India has been a member of the GATT since 8 July 1948, long before the WTO came into being on 1 January 1995.
- Why the other options are wrong: (2) includes statements 1 and 4, both wrong, and leaves out statements 2 and 3. (3) includes statement 1, which is wrong, and leaves out statement 3. (4) includes statement 4, which is wrong, and leaves out statement 2.

Topic 325

Urbanisation in India: trends and classification of towns

MCQs

Q1. Consider the following statements about the trend of urbanisation and the classes of towns in India:

1. According to the Census of India, a Class IV town has a population of 20,000 to 49,999.
2. India's urban share rose by more percentage points between 2001 and 2011 than between 1991 and 2001.
3. India's urban share in 1911 was higher than in 1901.
4. the number of towns counted in the Census of 1961 was smaller than the number counted in 1951.

Which of the statements given above is/are correct?

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

Q2. Consider the following statements about towns and urban growth in India:

1. According to the Census figures, Delhi overtook Kolkata in population as an urban agglomeration between 2001 and 2011.
2. Dhulia and Katni are examples of mining towns.
3. By R B Bhagat's estimate, natural increase contributed more than half of India's urban growth between 2001 and 2011.
4. Madurai is one of the Indian towns that began in the medieval period.

Which of the statements given above is/are correct?

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

Answer key and explanations

Q1. **Answer**: (2) 2 **and** 4 **only**

- Statement 1 is wrong: in the Census classes, 20,000 to 49,999 is Class III. Class IV is 10,000 to 19,999.
- Statement 2 is correct:27.81 to 31.16 is a 3.35 percentage-point rise in 2001–2011; 25.71 to 27.81 is a 2.10-point rise in 1991–2001. Minor second-decimal variations do not reverse the comparison.
- Statement 3 is wrong: the urban share fell from 10.84 per cent in 1901 to 10.29 per cent in 1911.
- Statement 4 is correct: The historical table counts 2,843 towns in 1951 and 2,365 in 1961, even though the urban share rose from 17.29 to 17.97 per cent.
- Why the other options are wrong: (1) has statement 1, which is wrong, and leaves out statement 4. (3) has statements 1 and 3, both wrong. (4) has statement 3, which is wrong, and leaves out statement 2.

Q2. **Answer**: (3) 1 **only**

- Statement 1 is correct: in 2001 Kolkata (13.22 million) was larger than Delhi (12.79 million). In the final Census figures of 2011 the Delhi UA had 16,349,831 people and the Kolkata UA 14,057,991, so Delhi had moved to second place, behind Greater Mumbai.
- Statement 2 is wrong: Dhulia and Katni are hubs of inland transport, with Agra, Mughal Sarai and Itarsi. Its mining towns are Raniganj, Jharia, Digboi, Ankaleshwar and Singrauli.
- Statement 3 is wrong: Bhagat estimates that natural increase gave 44 per cent of urban growth in 2001 to 2011, less than half. The other 56 per cent came from reclassification and migration together.
- Statement 4 is wrong: Madurai belongs among the ancient towns, those with a history of over 2,000 years, with Varanasi, Prayag (Allahabad) and Pataliputra (Patna). The towns that began in the medieval period include Delhi, Hyderabad, Jaipur, Lucknow, Agra and Nagpur.
- Why the other options are wrong: (1) has statement 2, which is wrong. (2) has statements 3 and 4, both wrong, and leaves out statement 1. (4) has statements 2, 3 and 4, all wrong, and leaves out statement 1.

Topic 326

Wind energy: onshore and offshore

MCQs

Q1. Consider the following statements about wind energy in India:

1. Under the National Wind-Solar Hybrid Policy, 2018, a plant is recognised as a hybrid plant if the rated power capacity of one resource is at least 25 per cent of the rated power capacity of the other.
2. In the State-wise estimates for Global Wind Day 2026, Rajasthan has the largest estimated wind power potential at 150 metres above ground level.
3. The Viability Gap Funding scheme approved by the Union Cabinet on 19 June 2024 is for 1 GW of offshore wind projects, 500 MW each off the coasts of Gujarat and Tamil Nadu.
4. In MNRE's State-wise figures for 28 February 2026, Tamil Nadu had a larger installed wind capacity than Gujarat.

Which of the statements given above is/are correct?

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

Q2. Consider the following statements about wind turbines and wind policy:

1. If the wind speed doubles, the power available in the wind roughly quadruples.
2. Under Betz's law, a wind turbine can extract up to about 80 per cent of the kinetic energy of the wind.
3. In a wind turbine, a gearbox can be used to speed up the rotation coming from the rotor, which allows a physically smaller generator.
4. The National Repowering and Life Extension Policy for Wind Power Projects of December 2023 was the first policy issued in India for repowering wind power projects.

Which of the statements given above is/are correct?

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

Answer key and explanations

Q1. **Answer**: (1) 1, 2 **and** 3 **only**

- Statement 1 is correct: the Hybrid Policy, 2018 recognises a plant as a wind-solar hybrid if the rated power capacity of one resource is at least 25 per cent of the rated power capacity of the other.
- Statement 2 is correct: The June 2026 State-wise estimates at 150 m put Rajasthan first of the eight States listed, with 284.2 GW, ahead of Gujarat (180.8 GW), Maharashtra (173.9 GW) and Karnataka (169.3 GW).
- Statement 3 is correct: the Cabinet approved ₹6,853 crore for 1 GW of offshore wind projects, 500 MW each off the coasts of Gujarat and Tamil Nadu, within a total of ₹7,453 crore.
- Statement 4 is wrong: on 28 February 2026 Gujarat had 15,197.19 MW and Tamil Nadu 12,102.76 MW. Gujarat was first and Tamil Nadu second.
- Why the other options are wrong: (2) leaves out statements 1 and 3, which are correct. (3) includes statement 4, which is wrong, and leaves out statement 2, which is correct. (4) includes statement 4, which is wrong, and leaves out statement 1, which is correct.

Q2. **Answer**: (4) 3 **only**

- Statement 1 is wrong: the power in the wind is proportional to the cube of the wind speed, so doubling the wind speed increases the available power eightfold, not fourfold.
- Statement 2 is wrong: under Betz's law a turbine cannot extract more than 59 per cent of the wind's kinetic energy.
- Statement 3 is correct: the rotor is connected to the generator directly or through a gearbox; the gearbox speeds up the rotation and allows a physically smaller generator.
- Statement 4 is wrong: the 2023 policy revises an earlier Policy for Repowering of Wind Power Projects, issued on 5 August 2016.
- Why the other options are wrong: (1) and (2) contain statement 1, which is wrong, and leave out statement 3, which is correct. (3) contains statements 2 and 4, which are wrong.

Topic 327

Integrated Guided Missile Development Programme

MCQs

Q1. Consider the following pairs of a missile of the Integrated Guided Missile Development Programme (IGMDP) and a feature of that missile:

Missile of the IGMDP	Feature
1. Prithvi	Inducted into the armed forces in three versions
2. Agni	Began as a demonstrator of re-entry technology
3. Trishul	Medium-range surface-to-air missile
4. Nag	Designed to destroy tanks

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 Integrated Guided Missile Development Programme (IGMDP):

1. A.P.J. Abdul Kalam became Director General of DRDO before he was appointed Director of the Defence Research and Development Laboratory (DRDL).
2. The IGMDP was sanctioned in July 1983.
3. Kalam headed the IGMDP as Director of DRDL.
4. The Advanced Systems Laboratory, DRDL and the Research Centre Imarat are all located in Hyderabad.

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

Answer key and explanations

Q1. **Answer**: (3) **Only three pairs**

- Pair 1 is correct: the Lok Sabha was told on 2 March 2006 that Prithvi had been inducted into the armed forces in three versions. Agni, by contrast, had been inducted in two variants.
- Pair 2 is correct: Agni was not one of the four missile systems of the programme; it was its technology demonstrator for re-entry technology, and that technology is now used in the Agni series.
- Pair 3 is wrong: Trishul is a short-range surface-to-air missile, closed as a technology demonstrator. The medium-range surface-to-air missile of the programme is Akash.
- Pair 4 is correct: Nag is the programme's anti-tank guided missile.
- So three pairs (1, 2 and 4) are correctly matched.
- Why (1) is wrong: a candidate reaches one pair by rejecting pairs 1 and 2 along with pair 3, for example by giving Prithvi Agni's "two variants" and by taking Agni for one of the four missile systems from the start.
- Why (2) is wrong: a candidate reaches two pairs by rightly rejecting pair 3 but also rejecting pair 1 or pair 2, for example by thinking that "technology demonstrator" belongs only to Trishul, so that Agni cannot have begun as one.
- Why (4) is wrong: a candidate reaches all four by accepting pair 3, mixing up the two surface-to-air missiles and giving Trishul the medium range that belongs to Akash.

Q2. **Answer**: (2) 2, 3 **and** 4 **only**

- Statement 1 is wrong: Kalam was appointed Director of DRDL in 1982 and became Director General of DRDO in 1992. The order in the statement is reversed.
- Statement 2 is correct: the Defence Minister told the Lok Sabha on 2 March 2006 that the programme was sanctioned on 26 July 1983.
- Statement 3 is correct: As Director of DRDL, Kalam was the Chief of the Integrated Guided Missile Development Programme.
- Statement 4 is correct: DRDO's missile cluster lists ASL and DRDL at Kanchanbagh and RCI at Vigyanakancha, all in Hyderabad. Together they make up the Dr APJ Abdul Kalam Missile Complex.
- 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.
- A candidate who strikes out statement 1 is still left with (2) and (4), and must know that the programme was sanctioned in July 1983 to choose between them.

Topic 328

Self-awareness: identifying emotional triggers and personal blind spots

MCQs

Q1. A Deputy Tahsildar finds that he snaps at his colleagues whenever a file comes back from the Collectorate with objections. Which one of the following responses best shows self-awareness?

- (1) He tells himself that an officer should never feel irritated, and pushes the feeling down without asking why it comes.
- (2) He notices that the clerk who handles returned files looks anxious, and asks her how she is coping with the work.
- (3) He sets himself the goal of clearing every pending file in his section this year, and keeps at it even when files are returned.
- (4) He notes that returned files make him irritable, sees that his sharp replies upset colleagues, and admits that answering objections is a weak area for him.

Q2. Consider the following statements:

1. In the Johari window of Joseph Luft and Harrington Ingham (1955), the blind area holds what others know about a person that the person does not know.
2. As a Cleveland Clinic psychologist describes them, emotional triggers are situations that spark sudden, intense negative reactions, often as a result of past trauma, pain or a stressful situation.
3. In Goleman's "What Makes a Leader?", the propensity to suspend judgement, to think before acting, is part of the definition of self-awareness.
4. In the Johari window, feedback from others moves information from the blind area into the open area.

Which of the statements given above is/are correct?

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

Answer key and explanations

Q1. **Answer**: (4) **He notes that returned files make him irritable**, **sees that his sharp replies upset colleagues**, **and admits that answering objections is a weak area for him**.

- Why (4) is correct: self-awareness, in Goleman's definition, is recognising and understanding one's own moods and emotions and their effect on others, together with a realistic view of one's strengths and weaknesses. Option (4) has all three: the feeling and its trigger (returned files make him irritable), its effect on others (his replies upset colleagues) and an honest limit (a weak area). This is the realistic self-assessment that is one of Goleman's hallmarks.
- Why (1) is wrong: it tries to control the feeling, which is the field of self-regulation, and skips what self-awareness needs: recognising the feeling and understanding what sets it off.
- Why (2) is wrong: it notices another person's feelings and responds to them. That is empathy, the ability to understand the emotional make-up of other people. It says nothing about his own irritation.
- Why (3) is wrong: it shows motivation, a propensity to pursue goals with energy and persistence. It leaves his reaction to returned files, and its effect on colleagues, untouched.

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

- Statement 1 is correct: in the Johari window, the blind area (blind spot) is the pane that is known to others but not known to self.
- Statement 2 is correct: this is the definition given by the Cleveland Clinic psychologist Susan Albers, who adds that triggers often come from past trauma, pain or a stressful situation.
- Statement 3 is wrong: in Goleman's table, the propensity to suspend judgement, to think before acting, is part of the definition of self-regulation. Self-awareness is defined as the ability to recognise and understand one's moods, emotions and drives, and their effect on others.
- Statement 4 is correct: feedback from others moves information from the blind area into the open area. Self-disclosure, not feedback, is what moves information from the hidden area into the open area.
- Why the other options are wrong: (2) leaves out statement 2, which is correct. (3) includes statement 3, which is wrong, and leaves out statement 1. (4) gives only statement 3, which is wrong, and leaves out statements 1, 2 and 4.

Topic 329

Compound, duplicate and other types of ratios

MCQs

Q1. What is the ratio compounded of the triplicate ratio of 2 : 3, the sub-triplicate ratio of 729 : 1 and the ratio 3 : 4, in its lowest terms?

- (1) 2 : 1
- (2) 3 : 1
- (3) 9 : 2
- (4) 6 : 1

Q2. Rs 3,900 is divided between two children, aged 6 years and 9 years, in the inverse ratio of the squares of their ages. How much does the younger child get?

- (1) Rs 1,200
- (2) Rs 1,560
- (3) Rs 2,340
- (4) Rs 2,700

Answer key and explanations

Q1. **Answer**: (1) 2 : 1

- Worked solution, step 1: make each ratio plain. The triplicate ratio of 2 : 3 is 8 : 27. The sub-triplicate ratio of 729 : 1 is $\sqrt[3]{729} : \sqrt[3]{1} = 9 : 1$, since 9 × 9 × 9 = 729. The third ratio is 3 : 4.
- Step 2: compound them. (8 × 9 × 3) : (27 × 1 × 4) = 216 : 108.
- Step 3: reduce. 216 : 108 = 2 : 1. Cancelling first: 9 × 3 = 27 cancels with 27, and 8 with 4 leaves 2 with 1.
- Why (2) is wrong: 3 : 1 comes from squaring for the triplicate ratio. 4 : 9 compounded with 9 : 1 and 3 : 4 gives 108 : 36 = 3 : 1.
- Why (4) is wrong: 6 : 1 comes from taking the square root for the sub-triplicate ratio. √729 = 27, so 27 : 1 is used in place of 9 : 1, and 8 × 27 × 3 : 27 × 1 × 4 = 648 : 108 = 6 : 1.
- Why (3) is wrong: 9 : 2 comes from tripling the terms of 2 : 3 instead of cubing them for the triplicate ratio. 6 : 9 compounded with 9 : 1 and 3 : 4 gives 162 : 36 = 9 : 2. Since 6 : 9 is the same ratio as 2 : 3, leaving out the triplicate step gives the same wrong figure.

Q2. **Answer**: (4) **Rs** 2,700

- Worked solution, step 1: the squares of the ages are 36 and 81. The inverse ratio of the squares is 1/36 : 1/81 = 81 : 36 = 9 : 4 (multiply both terms by 324). The younger child has the larger share.
- Step 2: divide Rs 3,900 in the ratio 9 : 4. There are 13 parts, and one part is 3,900 ÷ 13 = Rs 300. The younger child gets 9 × 300 = Rs 2,700, and the elder child gets 4 × 300 = Rs 1,200.
- Check: each share × the square of that child's age gives the same product (2,700 × 36 = 1,200 × 81 = 97,200), as it must when the shares are in the inverse ratio of the squares.
- Why (1) is wrong: Rs 1,200 uses the direct ratio of the squares, 36 : 81 = 4 : 9, and forgets to invert it, giving the younger child 4 parts out of 13. It is also the elder child's correct share, so reading off the wrong child gives the same figure.
- Why (2) is wrong: Rs 1,560 neither inverts nor squares. It divides in the ratio of the ages, 6 : 9 = 2 : 3, and gives the younger child 2/5 of 3,900.
- Why (3) is wrong: Rs 2,340 inverts but does not square. It divides in the ratio 9 : 6 = 3 : 2 and gives the younger child 3/5 of 3,900.

Topic 330

Molla Jayanti as a State festival: Atukuri Molla and her Ramayana

MCQs

Q1. Consider the following statements about Molla Jayanti and the Molla Ramayanamu:

1. The State's consolidated order on State functions for 2026 names the Youth Advancement, Tourism and Culture Department as the nodal department for Molla's birth anniversary.
2. The Molla Ramayanamu has six kandas, from the Balakanda to the Yuddhakanda, and leaves out the Uttarakanda.
3. Molla dedicated her Ramayana to the Vijayanagara king Krishnadevaraya.
4. In 2026 the State-level celebration of Molla Jayanti was to be held at Gopavaram.

Which of the statements given above is/are correct?

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

Q2. Consider the following statements about the poet Atukuri Molla:

1. In her preface, Molla credits the blessing of Srikantha Malleswara of Gopavaram for her gift of poetry.
2. In her preface, Molla says that a poem made of obscure words pleases the learned more than one built from everyday idioms and proverbs.
3. Molla's praise of Srinatha as an earlier poet is used as an argument against a 13th-century date for her.
4. Bammera Potana, the author of the Telugu Bhagavatam, was a court poet of the Eastern Chalukya king Rajaraja Narendra.

Which of the statements given above is/are correct?

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

Answer key and explanations

Q1. **Answer**: (2) 2 **only**

- Statement 1 is wrong: G.O.Rt.No.15 of 5 January 2026 names the B.C. Welfare Department as the nodal department for the birth anniversary of Atukuri Mollamamba. The Youth Advancement, Tourism and Culture Department is the nodal department for some other functions in the same list, which is why the statement looks plausible.
- Statement 2 is correct: she tells the story in six kandas, from the Balakanda to the Yuddhakanda, and leaves out the Uttarakanda, the part after the war.
- Statement 3 is wrong: she dedicated the work to Rama, not to any king, and says she wrote it at Rama's behest.
- Statement 4 is wrong: the State-level function was to be held at Tummalapalli Kalakshetram in Vijayawada, not at Gopavaram. Gopavaram is the place named in her preface, which is why the statement looks plausible.
- Why the other options are wrong: (1) includes statement 1, which is wrong. (3) leaves out statement 2 and includes statements 3 and 4, both wrong. (4) leaves out statement 2 and includes statements 1, 3 and 4, all wrong.

Q2. **Answer**: (3) 1 **and** 3 **only**

- Statement 1 is correct: in her preface she says she gained her poetry by the blessing of the renowned Srikantha Malleswara of Gopavaram.
- Statement 2 is wrong: it reverses her view. In her preface she compares a poem of obscure words to a conversation between the mute and the deaf, and says that everyday idioms and proverbs, well put together, make Telugu verse pleasing to the learned.
- Statement 3 is correct: her praise of Srinatha among earlier poets rules out a 13th-century date for her. Tikkana belongs to the 13th century; Srinatha, the court poet of the Reddi rulers, came later.
- Statement 4 is wrong: the court poet of Rajaraja Narendra was Nannaya, of the 11th century. Potana belongs to the 15th century and lived in the territory of Sarvajna Singama.
- Why the other options are wrong: (1) leaves out statement 3, which is correct. (2) includes statements 2 and 4, both wrong, and leaves out statement 1. (4) includes statements 2 and 4, both wrong, and leaves out statement 3.