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Day 32
20 MCQs and Explanations

English

APPSC Group 1
1,000 Topics in 100 Days

Topics 311–320

Topic 311

Plassey and Buxar: British conquest of Bengal

5. MCQs

Q1. Match List I (Person) with List II (Role in the conquest of Bengal):

List I (Person)	List II (Role in the conquest of Bengal)
A. Mir Jafar	1. Ruled Awadh and was defeated at Buxar in 1764
B. Mir Qasim	2. Was made Nawab of Bengal a second time and died in 1765
C. Shuja-ud-Daulah	3. Granted the Company the right to collect the revenue of Bengal, Bihar and Orissa in 1765
D. Shah Alam II	4. Moved his capital from Murshidabad to Monghyr

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

Q2. Consider the following statements about the British conquest of Bengal:

1. The Battle of Buxar was the first major victory the Company won in India.
2. Siraj-ud-Daulah objected to the Company fortifying Calcutta without his permission.
3. Calcutta, lost to Siraj-ud-Daulah in June 1756, was retaken by the English before the Battle of Plassey.
4. Company servants used the dastak, meant for the Company's own trade, to avoid duties on their private trade.

Which of the statements given above is/are correct?

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

6. Answer key and explanations

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

- Why it is correct: Mir Jafar was Nawab from 1757 to 1760 and was put back on the throne later (in 1763); he died in 1765 (A-2). Mir Qasim moved his capital from Murshidabad to Monghyr, away from Calcutta's interference (B-4). Shuja-ud-Daulah, the

Nawab of Awadh, was one of the allies defeated at Buxar in 1764 (C-1). Shah Alam II, the Mughal emperor, granted the Company the right to collect the revenue of Bengal, Bihar and Orissa in 1765, that is, the diwani (D-3).

- Why (1) is wrong: it exchanges both pairs, so all four matches are wrong.
- Why (2) is wrong: it exchanges Shuja-ud-Daulah and Shah Alam II. The diwani was granted by the emperor, not by the Nawab of Awadh; Shuja-ud-Daulah paid an indemnity in 1765.
- Why (4) is wrong: it exchanges Mir Jafar and Mir Qasim. Mir Qasim was Nawab only once (1760 to 1763) and died in 1777; it was Mir Jafar who came back to the throne and died in 1765.

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

- Statement 1 is wrong: the Battle of Plassey was the first major victory the Company won in India. Buxar came seven years later.
- Statement 2 is correct: Unauthorised fortification of Calcutta was a grievance of Siraj-ud-Daulah, and the nawabs would not let the Company extend its fortifications.
- Statement 3 is correct: the fort at Calcutta surrendered to Siraj-ud-Daulah on 20 June 1756. Clive and Admiral Watson retook Calcutta on 2 January 1757, about six months before Plassey (23 June 1757).
- Statement 4 is correct: Company servants used the exemption for their private trade too, and even sold dastaks to Indian merchants. Such officials refused to pay duty, causing an enormous loss of revenue for Bengal.
- Why the other options are wrong: (1) includes statement 1, which is wrong, and leaves out statements 2 and 3, which are correct. (3) leaves out statement 4, which is correct. (4) includes statement 1, which is wrong, and leaves out statement 4, which is correct.

Topic 312

Tribunals: Articles 323A and 323B, CAT and others

5. MCQs

Q1. Consider the following statements about administrative tribunals:

1. A law providing for administrative tribunals under Article 323A, including a separate tribunal for a State, is made by Parliament.
2. Under the Administrative Tribunals Act, 1985, a State Government may establish, by its own notification, an Administrative Tribunal for that State.
3. According to the Administrative Tribunals Act, 1985, the Act does not apply to officers and servants of the Supreme Court or of any High Court.
4. Part XIV-A, which contains Articles 323A and 323B, was debated in the Constituent Assembly and formed part of the Constitution as adopted in 1949.

Which of the statements given above is/are correct?

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

Q2. Consider the following statements about tribunals:

1. In L. Chandra Kumar v. Union of India (1997), the Supreme Court held that litigants may go directly to the High Court, bypassing the tribunal, when they question the validity of a statutory rule.
2. In S.P. Sampath Kumar v. Union of India, the Supreme Court accepted that the power of judicial review could be vested in an alternative institutional mechanism if it was an effective and real substitute for the High Court.
3. Disputes about the election of the President are among the matters listed in clause (2) of Article 323B.
4. The Armed Forces Tribunal was set up under the Administrative Tribunals Act, 1985.

Which of the statements given above is/are correct?

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

6. Answer key and explanations

Q1. Answer: (1) 1 and 3 only

- Statement 1 is correct: Article 323A(1) says "Parliament may, by law, provide" for administrative tribunals, and clause (2)(a) lets that law provide a tribunal for the Union and a separate one for each State or for two or more States. A State Legislature has no power under Article 323A; it is Article 323B that speaks of the "appropriate Legislature".
- Statement 2 is wrong: under section 4(2) of the Act, it is the Central Government that establishes a State Administrative Tribunal by notification, "on receipt of a request in this behalf from any State Government". The State asks; the Centre establishes.
- Statement 3 is correct: section 2 of the Act says it does not apply to any officer or servant of the Supreme Court or of any High Court (nor to the armed forces or the secretarial staff of Parliament and the State Legislatures).
- Statement 4 is wrong: section 46 of the Forty-second Amendment Act, 1976 inserted Part XIV-A. Being a 1976 addition, it was never before the Constituent Assembly.
- Why the other options are wrong: (2) gives statement 2, which is wrong, and leaves out statements 1 and 3, which are correct. (3) includes statement 4, which is wrong, and leaves out statement 3. (4) includes statements 2 and 4, both wrong, and leaves out statement 1.

Q2. Answer: (4) 2 only

- Statement 1 is wrong: L. Chandra Kumar held that tribunals "continue to act like Courts of first instance", so litigants may not go directly to the High Court even when they question the vires of a statute or rule. The only exception is a challenge to the Act that creates the tribunal itself, which the tribunal cannot declare unconstitutional.
- Statement 2 is correct: as L. Chandra Kumar summed up Sampath Kumar, judicial review could be vested in an "alternative institutional mechanism" if it was "an effective and real substitute for the High Court".
- Statement 3 is wrong: sub-clause (f) of Article 323B(2) covers elections to either House of Parliament and to the House or Houses of a State Legislature only. The election of the President is not in the list.
- Statement 4 is wrong: the Armed Forces Tribunal works under its own law, the Armed Forces Tribunal Act, 2007. Section 2 of the Administrative Tribunals Act, 1985 keeps the armed forces outside that Act.
- Why the other options are wrong: (1) includes statements 1 and 3, both wrong, and leaves out statement 2. (2) includes statements 1 and 4, both wrong, and leaves out statement 2. (3) includes statement 2 but also statements 3 and 4, both wrong.

Topic 313

Inequality: Lorenz curve, Gini coefficient and trends in India

5. MCQs

Q1. Consider the following statements about the Lorenz curve and the Gini coefficient:

1. In a Lorenz curve, people are arranged from the poorest upwards, and the cumulative percentage of income is plotted against the cumulative percentage of people.
2. Two different Lorenz curves can give the same Gini coefficient.
3. the Gini index is the area between the Lorenz curve and the line of equality, expressed as a percentage of the whole area of the square in which the curve is drawn.
4. The distribution of income is typically more unequal than the distribution of consumption.

Which of the statements given above is/are correct?

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

Q2. Consider the following statements about the measurement of inequality in India:

1. In the Household Consumption Expenditure Survey 2023-24, the Gini coefficient of consumption expenditure was higher in rural India than in urban India.
2. The statement of the Press Information Bureau of July 2025 that ranked India the fourth most equal country cited the World Inequality Report as its source.
3. In 2023-24, the Gini coefficient of consumption expenditure in rural Andhra Pradesh was higher than the all-India rural figure.
4. According to a 2024 study of the World Inequality Lab, the share of India's national income received by the top 1 per cent in 2022-23 was the highest in its series since 1922.

Which of the statements given above is/are correct?

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

6. Answer key and explanations

Q1. Answer: (4) 1, 2 and 4 only

- Statement 1 is correct: the Lorenz curve plots the cumulative percentages of total income against the cumulative number of recipients, starting with the poorest.
- Statement 2 is correct: Gini coefficients are not unique; two different Lorenz curves can give the same Gini, for example when the curves cross.
- Statement 3 is wrong: the Gini index expresses the area between the curve and the line of equality as a percentage of the maximum area under the line of equality. That area is the triangle under the diagonal, half the square, not the whole square. This is why Gini = A ÷ 0.5 = 2A.
- Statement 4 is correct: income inequality is typically greater than consumption inequality because the rich save a larger share of their income.
- Why the other options are wrong: (1) includes statement 3, which is wrong, and leaves out statement 2. (2) includes statement 3 and leaves out statements 1 and 4. (3) leaves out statement 4, which is correct.

Q2. Answer: (1) 4 only

- Statement 1 is wrong: in 2023-24 the Gini was 0.237 in rural India and 0.284 in urban India. Urban consumption was the more unequal, as it was in 2022-23 (0.266 rural, 0.314 urban).
- Statement 2 is wrong: PIB's statement of 5 July 2025 ("India's Story on Bridging Inequality") cited the World Bank's Spring 2025 Poverty and Equity Brief. The figure of 25.5 is the World Bank's consumption Gini, not a figure of the World Inequality Report.
- Statement 3 is wrong: in 2023-24 the rural Gini of Andhra Pradesh was 0.196, below the all-India rural figure of 0.237.
- Statement 4 is correct: Bharti, Chancel, Piketty and Somanchi (World Inequality Lab, 2024) put the top 1 per cent's share of national income at 22.6 per cent in 2022-23, the highest in their series since 1922.
- Why the other options are wrong: (2) includes statements 1 and 3, which are wrong, and leaves out statement 4. (3) includes statement 2, which is wrong. (4) includes all three wrong statements and leaves out statement 4.

Topic 314

NPAs: classification, causes and resolution through SARFAESI and the IBC

5. MCQs

Q1. Consider the following pairs of a class in the RBI's asset classification and a feature of it:

Class in the RBI's asset classification	Feature
1. SMA-0	Used only for loans other than revolving facilities
2. SMA-2	Principal or interest overdue for more than 30 and up to 60 days
3. Sub-standard asset	25 per cent provision on its secured portion in the first year
4. Doubtful asset	Has stayed in the sub-standard class for 12 months

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 bad loans and their resolution in India:

1. Under the SARFAESI Act, 2002, a secured creditor must obtain an order of the National Company Law Tribunal before it takes possession of the secured asset.
2. Under the RBI's Prudential Framework for Resolution of Stressed Assets of 7 June 2019, lenders are to make a prima facie review of a borrower's account within 30 days of a default.
3. According to the IBBI, as on 30 June 2026, more corporate insolvency resolution processes had ended with a resolution plan approved than with an order for liquidation.
4. According to the RBI's Financial Stability Report of June 2026, the gross NPA ratio of scheduled commercial banks was below 2 per cent in March 2026.

Which of the statements given above is/are correct?

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

6. Answer key and explanations

Q1. Answer: (2) Only two pairs

- Pair 1 is correct: the Master Circular gives SMA-0 only in its table for loans other than revolving facilities. Its table for cash credit and overdraft accounts has only SMA-1 and SMA-2.
- Pair 2 is wrong: "more than 30 and up to 60 days" overdue is SMA-1. SMA-2 is more than 60 and up to 90 days.
- Pair 3 is wrong: 25 per cent on the secured portion in the first year is the provision for a doubtful asset (doubtful for up to one year). A sub-standard asset needs 15 per cent of the outstanding, with 10 per cent more if the exposure is unsecured.
- Pair 4 is correct: the Master Circular defines a doubtful asset as one that has remained in the sub-standard category for 12 months.
- So two pairs (1 and 4) are correctly matched.
- Why (1) is wrong: a candidate reaches one pair by also rejecting pair 1, taking SMA-0 to apply to every loan, including cash credit and overdraft; or by also rejecting pair 4, taking the 12-month mark as the whole life of a sub-standard asset and not as the entry into the doubtful class.
- Why (3) is wrong: a candidate reaches three pairs by accepting pair 3, mixing up the 25 per cent in all for an unsecured sub-standard exposure with the 25 per cent on the secured portion of a doubtful asset; or by accepting pair 2, mixing up SMA-1 and SMA-2.
- Why (4) is wrong: a candidate reaches all four by making both of these mistakes.

Q2. Answer: (3) 2 and 4 only

- Statement 1 is wrong: the SARFAESI Act lets a secured creditor take possession of the secured asset without going to a court, once the account is an NPA and the 60-day notice has run out. The NCLT is the Adjudicating Authority under the IBC, not under the SARFAESI Act.
- Statement 2 is correct: the framework of 7 June 2019 says lenders shall undertake a prima facie review of the borrower's account within thirty days from the default. This is the review period.
- Statement 3 is wrong: as on 30 June 2026 the IBBI counts 1,484 CIRPs closed with a resolution plan approved and 3,074 closed with an order for liquidation. Liquidations were more than twice as many.
- Statement 4 is correct: the June 2026 FSR gives a GNPA ratio of 1.8 per cent for March 2026, a multi-decadal low.
- Why the other options are wrong: (1) includes statement 1, which is wrong, and leaves out statement 4. (2) includes statements 1 and 3, which are both wrong. (4) includes statement 3, which is wrong, and leaves out statement 2.

Topic 315

Major ports of India

5. MCQs

Q1. Match List I (Major port, present name) with List II (Former name):

List I (Major port, present name)	List II (Former name)
A. Deendayal Port	1. Kolkata
B. Syama Prasad Mookerjee Port	2. Ennore
C. V.O. Chidambaranar Port	3. Kandla
D. Kamarajar Port	4. Tuticorin

Select the correct answer using the codes given below:

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

Q2. Consider the following statements about the major ports of India:

1. Kamarajar Port began as a company incorporated under the Companies Act, 1956.
2. Ports declared to be major ports are an entry in the Concurrent List of the Seventh Schedule.
3. In 2025-26, Paradip Port handled more cargo than Jawaharlal Nehru Port.
4. The Major Port Authorities Act, 2021 replaced the Major Port Trusts Act, 1963.

Which of the statements given above is/are correct?

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

6. Answer key and explanations

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

- A-3: Kandla Port Trust was renamed Deendayal Port Trust by a notification of 25 September 2017. The port is on the Gulf of Kutch in Gujarat.
- B-1: Kolkata Port was renamed Syama Prasad Mookerjee Port, Kolkata by the Gazette notification of 24 June 2020, after the Cabinet's approval announced on 3 June 2020.

- C-4: the Union Cabinet approved renaming Tuticorin Port Trust as V.O. Chidambaranar Port Trust on 27 January 2011. V.O. Chidambaranar Pillai was from Ottapidaram, near Tuticorin.
- D-2: Ennore Port Limited became Kamarajar Port Limited on 25 February 2014, when the Registrar of Companies issued a fresh certificate of incorporation.
- Why (2) is wrong: it exchanges Kandla and Kolkata between Deendayal and Syama Prasad Mookerjee. C-4 and D-2 are right.
- Why (3) is wrong: it exchanges Tuticorin and Ennore, the two Tamil Nadu ports. A-3 and B-1 are right.
- Why (4) is wrong: it makes both exchanges, so none of its four pairs is right.

Q2. Answer: (4) 1, 3 and 4

- Statement 1 is correct: the port was incorporated as Ennore Port Limited under the Companies Act, 1956 in October 1999. It was renamed Kamarajar Port Limited in 2014 and is the one company among the 12 operational major ports.
- Statement 2 is wrong: major ports are Entry 27 of the Union List. The Concurrent List entry on ports (Entry 31) covers ports other than major ports.
- Statement 3 is correct: in 2025-26 (advance estimates) Paradip handled 156.45 MT and Jawaharlal Nehru 102.01 MT (Ministry, March 2026 table).
- Statement 4 is correct: the Major Port Trusts Act, 1963 stands repealed with the coming into force of the 2021 Act on 3 November 2021.
- Why the other options are wrong: (1) contains statement 2, which is wrong, and leaves out statements 1 and 4, which are correct. (2) contains statement 2 and leaves out statement 3. (3) leaves out statement 1, which is correct.

Topic 316

Rural and urban population: definitions and India-AP comparisons

5. MCQs

Q1. Consider the following statements about rural and urban areas in Census 2011:

1. Census towns for the 2011 Census were identified on the basis of the data of the 2001 Census.
2. A place with a municipality was counted as a statutory town only if at least 75 per cent of its male main workers were in non-agricultural work.
3. According to the Census, census towns outnumbered statutory towns in India in 2011.
4. Between 2001 and 2011, the number of census towns in India more than doubled.

Which of the statements given above is/are correct?

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

Q2. Consider the following statements about rural and urban population in Census 2011:

1. The urban share of the population of the undivided State of Andhra Pradesh was below India's urban share.
2. In the provisional figures, the urban population of the undivided State of Andhra Pradesh grew more slowly in 2001-11 than India's urban population.
3. In the provisional figures, the rural population of the undivided State of Andhra Pradesh grew by less than 2 per cent in 2001-11.
4. According to the Census 2011, India's sex ratio was higher in urban areas than in rural areas.

Which of the statements given above is/are correct?

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

6. Answer key and explanations

Q1. Answer: (3) 1 and 4 only

- Statement 1 is correct: for 2011, census towns were identified from the data of the previous Census, that of 2001.
- Statement 2 is wrong: a statutory town is urban because it has a municipality, corporation, cantonment board or notified town area committee, whatever its population or workforce. The test of 75 per cent of male main workers in non-agricultural work applies only to census towns, places without such a body.
- Statement 3 is wrong: in 2011 India had 4,041 statutory towns and 3,894 census towns, so statutory towns were still slightly more numerous, even though census towns had nearly tripled from 1,362 in 2001.
- Statement 4 is correct: census towns rose from 1,362 in 2001 to 3,894 in 2011, about 2.86 times, so they more than doubled. Statutory towns rose only from 3,799 to 4,041.
- Why the other options are wrong: (1) has statement 2, which is wrong, and leaves out statement 4. (2) has statements 2 and 3, both wrong. (4) has statement 3, which is wrong, and leaves out statement 1.

Q2. Answer: (2) 3 only

- Statement 1 is wrong: the undivided State's urban share in 2011 was 33.49 per cent (provisional), above India's 31.16 per cent. Only on the figures recast for the present State (29.47 per cent, AP Socio-Economic Survey) was Andhra Pradesh below India; the two figures cover different areas.
- Statement 2 is wrong: in the provisional figures, the undivided State's urban population grew by 36.26 per cent in 2001-11, faster than India's 31.80 per cent.
- Statement 3 is correct: in the provisional figures of Census 2011, the undivided State's rural population grew by 1.64 per cent in 2001-11, while its urban population grew by 36.26 per cent.
- Statement 4 is wrong: India's sex ratio in 2011 was 949 females per 1,000 males in rural areas and 929 in urban areas, so it was lower in urban areas.
- Why the other options are wrong: (1) has statements 1 and 2, both wrong. (3) has statements 2 and 4, both wrong, and leaves out statement 3. (4) has statements 1 and 4, both wrong, and leaves out statement 3.

Topic 317

CSIR and its laboratories

5. MCQs

Q1. Consider the following pairs of a CSIR laboratory and the place where it is located:

CSIR laboratory	Place where it is located
1. National Institute of Oceanography (NIO)	Goa
2. Central Mechanical Engineering Research Institute (CMERI)	Dhanbad
3. Central Salt and Marine Chemicals Research Institute (CSMCRI)	Bhavnagar
4. Institute of Microbial Technology (IMTECH)	Chandigarh

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 Council of Scientific and Industrial Research (CSIR):

1. CSIR is registered as a society under the Societies Registration Act, 1860.
2. Indian Standard Time is maintained by CSIR's National Physical Laboratory, New Delhi.
3. The Prime Minister of India is the ex officio President of CSIR.
4. Under the CSIR Aroma Mission, lavender was introduced in Jammu and Kashmir by CSIR's Central Institute of Medicinal and Aromatic Plants, Lucknow.

Which of the statements given above is/are correct?

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

6. Answer key and explanations

Q1. Answer: (3) Only three pairs

- Pair 1 is correct: CSIR's network map places the National Institute of Oceanography at Goa.

- Pair 2 is wrong: CMERI is at Durgapur. Dhanbad is the city of another CSIR laboratory, the Central Institute of Mining and Fuel Research (CIMFR).
- Pair 3 is correct: CSIR's network map places CSMCRI at Bhavnagar.
- Pair 4 is correct: IMTECH is at Chandigarh. Chandigarh has two CSIR laboratories, IMTECH and CSIO.
- So three pairs (1, 3 and 4) are correctly matched.
- Why (1) is wrong: a candidate reaches one pair by rejecting pairs 3 and 4 along with pair 2, for example by taking CSIO for the only CSIR laboratory at Chandigarh and by placing the salt and marine chemicals laboratory at Goa, with the oceanography laboratory.
- Why (2) is wrong: a candidate reaches two pairs by rightly rejecting pair 2 but also rejecting pair 4, believing that CSIO is the only CSIR laboratory at Chandigarh.
- Why (4) is wrong: a candidate reaches all four by accepting pair 2, giving the mechanical engineering laboratory the city of the mining and fuel laboratory, CIMFR, Dhanbad.

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

- Statement 1 is correct: CSIR's Rules, Regulations and Bye-Laws carry its certificate of registration under the Societies Registration Act (XXI of 1860), dated 12 March 1942.
- Statement 2 is correct: IST is maintained by CSIR-NPL, New Delhi, the National Metrology Institute of India.
- Statement 3 is correct: under CSIR's bye-laws the Prime Minister of India is the ex officio President of the society, and CSIR's organisational structure lists the Prime Minister as its President.
- Statement 4 is wrong: CSIR-IIIM, Jammu, introduced lavender in Jammu and Kashmir. CIMAP, Lucknow, also participates in the Aroma Mission, but it did not introduce lavender in Jammu and Kashmir.
- Why the other options are wrong: (2) includes statement 4, which is wrong, and leaves out statement 3. (3) leaves out statements 1 and 2, which are both correct. (4) includes statement 4, which is wrong.
- Statements 1, 2 and 3 alone do not settle the answer: they leave both (1) and (4). Only knowing that statement 4 is wrong rules out (4).

Topic 318

Numerical Venn diagrams: two- and three-set inclusion-exclusion

5. MCQs

Q1. In a group of 120 people (illustrative figures), 60 like tea, 50 like coffee and 40 like juice. 20 like both tea and coffee, 15 like both coffee and juice, and 18 like both tea and juice. 14 people like none of the three drinks. How many people like exactly one of the three drinks?

- (1) 44
- (2) 71
- (3) 80
- (4) 85

Q2. In a survey of 200 people in a town (illustrative figures), 140 use UPI and 110 use a debit card for payments. At least 20 of the 200 use neither. What is the least possible number of people who use both?

- (1) 30
- (2) 40
- (3) 50
- (4) 70

6. Answer key and explanations

Q1. Answer: (2) 71

- Step 1, find the centre: at least one = 120 - 14 = 106. S1 = 60 + 50 + 40 = 150 and S2 = 20 + 15 + 18 = 53. All three = 106 - 150 + 53 = 9.
- Step 2, the "two but not the third" regions: tea and coffee only = 20 - 9 = 11; coffee and juice only = 15 - 9 = 6; tea and juice only = 18 - 9 = 9.
- Step 3, the "only" regions: only tea = 60 - 11 - 9 - 9 = 31; only coffee = 50 - 11 - 6 - 9 = 24; only juice = 40 - 6 - 9 - 9 = 16.
- Exactly one = 31 + 24 + 16 = 71. Check by formula: 150 - 2 × 53 + 3 × 9 = 71. Check of the data: no region is negative, and 31 + 24 + 16 + 11 + 6 + 9 + 9 + 14 = 120.
- Why (1) is wrong: 44 = 106 - 53 - 9. It takes the three pair totals (53) as the number who like exactly two, so the centre is counted in them three times. Exactly two is 53 - 3 × 9 = 26.
- Why (3) is wrong: 80 = 106 - 26. It takes away those who like exactly two (26) from those who like at least one, but forgets to take away the 9 who like all three.
- Why (4) is wrong: 85 = 120 - 26 - 9. It starts from the whole group instead of from those who like at least one drink, so it counts the 14 who like none. 85 is the number who like at most one.

Q2. Answer: (4) 70

- Worked solution: at least 20 use neither, so at most 200 - 20 = 180 use at least one of the two.
- Room method: outside the UPI circle there is room for at most 180 - 140 = 40 card users. The other 110 - 40 = 70 card users must also use UPI. Formula: 140 + 110 - 180 = 70.
- 70 can happen: 70 use both, 70 use only UPI, 40 use only a card and 20 use neither, which adds up to 200. So the least possible number is 70. (The greatest would be 110, which is not asked.)
- Why (3) is wrong: 50 = 140 + 110 - 200. It ignores the people who use neither and lets all 200 be inside the circles. With 50 in both, the regions would be 90, 50 and 60, adding up to 200, so no one would use neither, which breaks "at least 20 use neither".
- Why (2) is wrong: 40 = 180 - 140 is the room outside the UPI circle, the largest possible number who use only a card. The method stops one step short; the overlap is 110 - 40.
- Why (1) is wrong: 30 = (140 + 110 - 200) - 20. It subtracts the 20 from the overlap instead of from the room inside the circles, so the correction goes the wrong way.

Topic 319

Percentage applications: price, consumption and expenditure relationships

5. MCQs

Q1. The price of tomatoes rises by 50 per cent. A family decides that its expenditure on tomatoes may rise by only 23 per cent. By what per cent must the family reduce its consumption of tomatoes?

- (1) 18%
- (2) 27%
- (3) 33 1/3%
- (4) 50%

Q2. A fall of 25 per cent in the price of tur dal lets a hostel buy 5 kg more tur dal for ₹1,800. What is the reduced price of tur dal per kg?

- (1) ₹54
- (2) ₹67.50
- (3) ₹90
- (4) ₹120

6. Answer key and explanations

Q1. Answer: (1) 18%

- Worked solution: factor for expenditure = factor for price × factor for consumption. So 1.23 = 1.5 × consumption factor, and the consumption factor = 1.23 ÷ 1.5 = 0.82. Consumption must fall by 18%.
- In one step: (50 - 23)/(100 + 50) × 100 = 27/150 × 100 = 18%.
- Check: take a price of ₹100 and a consumption of 100 units, an expenditure of ₹10,000. After the change: 150 × 82 = ₹12,300, which is 23% more than ₹10,000.
- Why (2) is wrong: 27% = 50 - 23. It subtracts the percentages, that is, it measures the gap against the old price (100) instead of the new price (150). The changes are linked by the product rule.
- Why (3) is wrong: 33 1/3% = 50/150 × 100 is the cut that keeps expenditure fixed. It ignores the 23% rise in expenditure that the family allows.
- Why (4) is wrong: 50% takes the cut equal to the price rise. Then the expenditure factor would be 1.5 × 0.5 = 0.75, a fall of 25%, not a rise of 23%.

Q2. Answer: (3) ₹90

- Worked solution: at the reduced price, the old quantity costs 75% of ₹1,800 = ₹1,350. So 25% of ₹1,800 = ₹450 is saved. The saved money buys the extra 5 kg at the reduced price: 450 ÷ 5 = ₹90 per kg.
- Check: original price = 90 ÷ 0.75 = ₹120 per kg. ₹1,800 bought 1,800 ÷ 120 = 15 kg before and buys 1,800 ÷ 90 = 20 kg now, which is 5 kg more.
- Fraction route: a fall of 1/4 lets consumption rise by 1/3. So 5 kg is 1/3 of the old quantity, which is 15 kg; the old price is 1,800 ÷ 15 = ₹120 and the reduced price 120 × 3/4 = ₹90.
- Why (1) is wrong: ₹54 comes from using the rule for a price rise (consumption changes by 1/(n + 1) = 1/5) for a fall. Then 5 kg is taken as 1/5 of the old quantity: old quantity 25 kg, old price 1,800 ÷ 25 = ₹72, reduced price 72 × 3/4 = ₹54.
- Why (2) is wrong: ₹67.50 comes from taking the rise in consumption equal to the fall in price (25% = 1/4). Then the old quantity is 20 kg, the old price ₹90 and the reduced price 90 × 3/4 = ₹67.50. The same figure comes from taking 450 ÷ 5 = ₹90 as the original price and then cutting it by 25%: ₹90 is already the reduced price.
- Why (4) is wrong: ₹120 is the original price. The question asks for the reduced price.

Topic 320

Current affairs: NITI Aayog's Fiscal Health Index and where Andhra Pradesh stands

5. MCQs

Q1. Consider the following statements about NITI Aayog's Fiscal Health Index 2026:

1. Andhra Pradesh's score in the Quality of Expenditure sub-index is higher than its score in each of the other four sub-indices.
2. The index ranks the North-Eastern and Himalayan States together with the major States in a single list of 28 States.
3. According to the report, the data for the indicators are taken from the Reserve Bank of India's study of State Budgets.
4. The index ranks the States on the basis of their finances in the year 2022-23.

Which of the statements given above is/are correct?

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

Q2. Consider the following statements:

1. In the Fiscal Health Index 2026, Telangana is placed in the Aspirational category, along with Andhra Pradesh.
2. In the figures of the Andhra Pradesh Budget 2026-27, outstanding liabilities stand at 36 per cent of GSDP in each of 2024-25, 2025-26 (revised estimate) and 2026-27 (budget estimate).
3. On MoSPI's estimates at current prices, Andhra Pradesh's GSDP in 2024-25 was about three times its GSDP in 2014-15.
4. In the Fiscal Health Index, the Fiscal Prudence sub-index is built from interest payments as a share of revenue receipts and outstanding liabilities as a share of GSDP.

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

6. Answer key and explanations

Q1. Answer: (4) 1 only

- Statement 1 is correct: Andhra Pradesh's sub-index scores for 2023-24 are 43.1 (Quality of Expenditure), 21.7 (Revenue Mobilisation), 9.9 (Fiscal Prudence), 36.6 (Debt Index) and 4.2 (Debt Sustainability). Quality of Expenditure is the highest of the five.
- Statement 2 is wrong: the 18 major States are ranked in one list; the 10 North-Eastern and Himalayan States added in this edition are ranked separately.
- Statement 3 is wrong: the indicator data are taken from the Comptroller and Auditor General of India (CAG).
- Statement 4 is wrong: the 2026 edition, released on 11 March 2026, scores the year 2023-24. The year 2022-23 belongs to the first edition, launched on 24 January 2025.
- Why the other options are wrong: (1) has statements 2 and 3, both wrong, and leaves out 1. (2) has statements 2 and 4, which are wrong. (3) has statements 3 and 4, both wrong, and leaves out 1.

Q2. Answer: (2) 2 and 3 only

- Statement 1 is wrong: Telangana is a Front Runner, seventh with a score of 44.3. The Aspirational States are Kerala, West Bengal, Andhra Pradesh and Punjab.
- Statement 2 is correct: the Budget 2026-27 gives outstanding liabilities of 36 per cent of GSDP for 2024-25, for 2025-26 (revised estimate) and for 2026-27 (budget estimate).
- Statement 3 is correct: MoSPI's estimates, in the RBI Handbook, give Rs 5,24,976 crore for 2014-15 and Rs 15,93,062 crore for 2024-25, about 3.03 times.
- Statement 4 is wrong: those two indicators make up the Debt Index. Fiscal Prudence is built from the gross fiscal deficit as a share of GSDP and the revenue deficit as a share of GSDP.
- Why the other options are wrong: (1) has statement 1, which is wrong, and leaves out 3. (3) has statement 4, which is wrong, and leaves out 2. (4) has statements 1 and 4, both wrong, and leaves out 2 and 3.