IAS WITH DR RAVI
AIM. PREPARE. ACHIEVE

DAY 18

Source Index

APPSC Group 1 · Topics 171–180 · English

Complete topic-level source records, their uses, source qualifications and the Telugu source notes. Source IDs restart within each topic; always cite the topic number with the source ID. Source notes explain relevant definitions, dates and limitations.

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Current-date qualifiers and source limitations remain in the lesson text. Source IDs are local to each topic; consult the separate Source Index for full records.

DAY 18 | TOPIC 171

Portuguese in India

History & Culture | Unit A-4

7. Sources

7.1 Sources

S1

Source: NCERT, *Our Pasts III* (Class VIII), Chapter 2 "From Trade to Territory: The Company Establishes Power". Official file: https://ncert.nic.in/textbook/pdf/hess202.pdf ; read in the Internet Archive copy of the NCERT book: https://archive.org/details/ncert-hess2 (text: https://archive.org/download/ncert-hess2/hess202_djvu.txt)

Used for: "it was Vasco da Gama, a Portuguese explorer, who had discovered this sea route to India in 1498"; the Portuguese had their base in Goa

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S2

Source: NCERT, *Themes in Indian History, Part II* (Class XII), Theme Eight "Peasants, Zamindars and the State", section "Agricultural prosperity and population growth" and the box "The spread of tobacco". Official file: https://ncert.nic.in/textbook/pdf/lehs208.pdf ; read on SATHEE (IIT Kanpur): https://sathee.iitk.ac.in/ncert-books/class-12/themes-in-indian-history/chapter-08-peasants-zamindars-eight-and-the-state-agrarian-society-and-the-mughal-empire

Used for: Maize via Africa and Spain; tomatoes, potatoes and chillies from the New World; pineapple and papaya; tobacco first in the Deccan, spreading to northern India in the early seventeenth century; no carrier named

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S3

Source: Bipan Chandra, *Modern India: A History Textbook for Class XII*, NCERT, reprint 1982 (the "old NCERT"), Chapter II "Indian States and Society in the 18th Century", passage on Baji Rao I. Internet Archive: https://archive.org/details/dli.ernet.231730 (text: https://archive.org/stream/dli.ernet.231730/231730-Modern%20India%20A%20History%20Textbook%20For%20Class-xii_djvu.txt)

Used for: The campaign against the Portuguese under Baji Rao I; Salsette and Bassein captured; the Portuguese kept their other possessions on the west coast

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S4

Source: Encyclopaedia Britannica, "Vasco da Gama" (summary and map caption). https://www.britannica.com/biography/Vasco-da-Gama

Used for: First voyage 1497 to 1499 round the Cape of Good Hope; opened the sea route from western Europe to the East; died at Cochin on 24 December 1524

S5

Source: Encyclopaedia Britannica, "Afonso de Albuquerque" (summary, by Harold V. Livermore). https://www.britannica.com/biography/Afonso-de-Albuquerque

Used for: "conquered Goa and Melaka", establishing Portuguese control over key Eastern trade routes; died 15 December 1515 at sea off Goa

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S6

Source: Wikipedia, "Portuguese India" (citing Ravenstein, *A Journal of the First Voyage of Vasco da Gama*; Correa, *The Three Voyages of Vasco da Gama*; Diffie and Winius, *Foundations of the Portuguese Empire*, 1977; Whiteway, *The Rise of Portuguese Power in India*, 1899; Priolkar, *The Printing Press in India*, 1958; Neill, *A History of Christianity in India*, 1984). https://en.wikipedia.org/wiki/Portuguese_India

Used for: Da Gama at Calicut on 20 May 1498, the Zamorin's concession and the customs duties in gold; second voyage at Calicut on 30 October 1502, back in September 1503; Cabral at Calicut on 13 September 1500, the factory and the attack, treaties with Cochin and Cannanore, return on 23 June 1501 with 4 of 13 ships; Almeida appointed on 25 March 1505; Chaul as a combined Mamluk and Gujarat fleet; Diu 1509; Goa from Bijapur with Timoja's help; Malacca and Hormuz; incentives for marrying local women; sati abolished; capital moved from Cochin to Goa in 1530; the cartaz; dates of Cochin, Cannanore, Goa, Bassein, Salsette, Diu, Daman and Dadra; Bombay ceded in 1661; the loss of 1739; the war with the VOC and the peace of 1663; the pepper share by the 1620s; the companies of 1669 and 1685; Dadra on 24 July 1954 and Nagar Haveli on 2 August 1954; surrender of 19 December 1961 and "450 years"; the press of 1556 at St Paul's College by Joao de Bustamante; Xavier's letter of 1546 and the Inquisition of 1560; the expulsion of the Jesuits in 1759

S7

Source: Wikipedia, "Afonso de Albuquerque" (citing Diffie, Winius and Shafer, 1977; Crowley, *Conquerors*, 2015; Stephens, *Albuquerque*, 1897; Shastry and Borges, *Goa-Kanara Portuguese Relations, 1498-1763*, 2000; Newitt, *A History of Portuguese Overseas Expansion*, 2005). https://en.wikipedia.org/wiki/Afonso_de_Albuquerque

Used for: Governor from 4 November 1509; first occupation of Goa in March 1510, counter-attack by Ismail Adil Shah, return on 25 November 1510 and capture in less than a day; Malacca in August 1511; Hormuz 1507, given up January 1508, and 1515; Aden 1513; the marriage policy of 1511, freeman status and freedom from Crown taxes; sati banned; Persian horses sold to Vijayanagara and Hindu princes; death on 16 December 1515 within sight of Goa

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S8

Source: Wikipedia, "Francisco de Almeida" (citing Logan, *Malabar Manual*; Sreedhara Menon, *A Survey of Kerala History*, 1967; Guilmartin, 1995). https://en.wikipedia.org/wiki/Francisco_de_Almeida

Used for: First viceroy, 12 September 1505 to 4 November 1509; the condition of four forts; Anjediva (13 September 1505), St Angelo at Cannanore (23 October 1505), Cochin; Chaul (March 1508), Mir Hussain's Egyptian fleet and Lourenco's death; Diu (3 February 1509), 23 ships, the four allies, end of the Ottoman and Egyptian presence; death at Table Bay on 1 March 1510

S9

Source: Wikipedia, "Nuno da Cunha" (citing Joao de Barros, *Asia*). https://en.wikipedia.org/wiki/Nuno_da_Cunha

Used for: Governor from April 1529 to 1538; Bassein captured from Bahadur Shah on 20 January 1533; Daman sacked in 1529

S10

Source: Wikipedia, "Treaty of Bassein (1534)" (citing Ring, Salkin and La Boda (eds.), *International Dictionary of Historic Places: Asia and Oceania*, p. 142). https://en.wikipedia.org/wiki/Treaty_of_Bassein_(1534)

Used for: Signed on 23 December 1534, at sea, by Nuno da Cunha and Sultan Bahadur of Gujarat

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S11

Source: Wikipedia, "Treaty of Tordesillas". https://en.wikipedia.org/wiki/Treaty_of_Tordesillas

Used for: Signed on 7 June 1494 by Portugal and Castile; the line moved 270 leagues west of the *Inter caetera* line; *Inter caetera* of 4 May 1493 by Pope Alexander VI; the eastern side to Portugal, with the route to India and eastern Brazil

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S12

Source: Wikipedia, "Rodolfo Acquaviva" (citing Maclagan, *The Jesuits and the Great Mogul*, 1932; Bartoli, 1663). https://en.wikipedia.org/wiki/Rodolfo_Acquaviva

Used for: St Paul's College, Goa; Akbar asked for missionaries; at Akbar's court 1580 to 1583; Ibadat Khana at Fatehpur Sikri; Monserrate and the Persian-speaking interpreter Francisco Henriques; efforts judged fruitless; Jesuits at the Mughal courts and Agra for two centuries

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S13

Source: Wikipedia, "Siege of Hooghly" (citing Marshman, *History of India*; Schimmel, *The Empire of the Great Mughals*, 2004; Dasgupta, *European Trade and Colonial Conquest*, 2005). https://en.wikipedia.org/wiki/Siege_of_Hooghly

Used for: Hooghly founded by the Portuguese in 1579; Qasim Khan's report of piracy, smuggling, kidnapping and slave trade; Shah Jahan's decision; siege from 24 June to 24 September 1632; Mughal victory

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S14

Source: Wikipedia, "Annexation of Goa". https://en.wikipedia.org/wiki/Annexation_of_Goa

Used for: Operation Vijay, 17 to 19 December 1961; surrender signed by Manuel Antonio Vassalo e Silva on 19 December 1961; Daman and Diu surrendering separately; 451 years of Portuguese rule; union territory under the President; attacks on Dadra and Nagar Haveli from 22 July to 2 August 1954, the groups that took part, and the surrender of 11 August 1954; International Court of Justice ruling of 12 April 1960

S15

Source: NCERT, *India and the Contemporary World II* (Class X), Chapter "Print Culture and the Modern World", section "Print Comes to India". Official file: https://ncert.nic.in/textbook/pdf/jess305.pdf ; read in the Internet Archive copy: https://archive.org/download/ncert-jess3/jess305_djvu.txt

Used for: "The printing press first came to Goa with Portuguese missionaries in the mid-sixteenth century"; Jesuit priests printed tracts in Konkani

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S16

Source: *Review of Culture*, Instituto Cultural de Macau (Macau government). https://www.icm.gov.mo/rc/viewer/20006/837

Used for: The press set up by the Jesuits in Goa in 1556; the printer Joao Bustamente, who reached Goa on 3 September 1556; the *Conclusoes* as the first book printed

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S17

Source: Administration of Dadra and Nagar Haveli and Daman and Diu, official website, Daman history page. https://dded.gov.in/detail.php?id=21

Used for: First Portuguese attack on Daman in 1529; the Shah of Gujarat's agreement to cede Daman; Daman taken on 2 February 1559; Operation Vijay from 17 December 1961 and the surrender of the garrison on 19 December 1961

S18

Source: Wikipedia, "Portuguese conquest of Daman" (citing Danvers, *The Portuguese in India*, vol. I, 1894). https://en.wikipedia.org/wiki/Portuguese_conquest_of_Daman

Used for: Daman taken from the Sultanate of Gujarat on 2 February 1559 under the viceroy Constantino de Braganza

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S19

Source: Encyclopaedia Britannica, "Francisco de Almeida". https://www.britannica.com/biography/Francisco-de-Almeida

Used for: Viceroy from March 1505; aim "to make Portugal the paramount power in the East and to monopolize the spice trade"; a series of fortified posts; victory off Diu in February 1509; killed at Table Bay on 1 March 1510

S20

Source: Banglapedia, "Portuguese, The", article credited to Aniruddha Ray. https://en.banglapedia.org/index.php/Portuguese,_The

Used for: The settlement at Hughli taking shape after 1579 and Akbar's farman of 1579; piracy and the slave market at Hughli; the Mughal capture of Hughli on 13 September 1632

S21

Source: Wikipedia, "4th Portuguese India Armada (Gama, 1502)". https://en.wikipedia.org/wiki/4th_Portuguese_India_Armada_(Gama,_1502)

Used for: Fleet of 20 ships; arrival before Calicut on 29 October 1502; main fleet back in Lisbon in September 1503

S22

Source: Wikipedia, "Goa Inquisition" (citing Benton, *Law and Colonial Cultures*, 2002). https://en.wikipedia.org/wiki/Goa_Inquisition

Used for: Inquisition established in 1560 (1561 in the infobox); Xavier's letter dated 1545 in one place and 1546 in another

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S23

Source: Wikipedia, "Portuguese Bombay and Bassein" (citing Da Cunha, *The Origin of Bombay*, 1993; *Greater Bombay District Gazetteer*, 1960, p. 166). https://en.wikipedia.org/wiki/Portuguese_Bombay_and_Bassein

Used for: The Treaty of Bassein of 23 December 1534 and the Seven Islands of Bombay; their formal surrender by the Sultan of Gujarat on 25 October 1535

S24

Source: Dadra and Nagar Haveli District Administration, official website, District Profile. https://dnh.gov.in/district-profile/

Used for: The Maratha treaty of 1779 letting the Portuguese collect revenue from the area; Portuguese occupation of Dadra and Nagar Haveli between 1783 and 1785

S25

Source: *EVE, Encyclopaedia of Portuguese Expansion* (CHAM, NOVA FCSH, Lisbon), entry "Chaul" by Luis Frederico Antunes, 2009. https://eve.fcsh.unl.pt/en/places/chaul

Used for: The fortress at Chaul of 1521, built with the approval of the Sultan of Ahmadnagar; Chaul ceded to the Marathas in 1740

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7. ఆధారాలు 7.1 ఆధారాలు

ఆధారాల పట్టిక, లింకులు ఇంగ్లిష్ వెర్షన్‌లోని 7.1 విభాగంలో ఉన్నవే (S1 నుంచి S25). రెండు వెర్షన్లకూ అవే ఆధారాలు.

Source notes and scope

Tordesillas reference line

The treaty placed the demarcation line 370 leagues west of Cape Verde.

- https://www.unesco.org/es/memory-world/treaty-tordesillas

Diu in 1509 and later challenges

The 1509 victory did not end later challenges. The later 1538 challenge is documented; a precise fleet count and direct Ottoman participation in the 1509 coalition are not established by this reference.

- https://www.defesa.gov.pt/pt/defesa/organizacao/comissoes/cphm/rphm/edicoes/ano3/n.5/3/

Goa printing press in 1556

Government printing history supports 1556 at St Paul's, before the Inquisition.

- https://ebooks.goaprintingpress.in/AboutUs
- https://www.goa.gov.in/places/church-and-college-of-st-paul/

ICJ holding in 1960

The ICJ distinguished a right of passage for private persons, civil officials and goods, subject to Indian regulation and control, from the absence of such a right for armed forces, armed police, arms and ammunition.

- https://www.icj-cij.org/case/32

Gama's 1502 fleet

University archaeological research gives a fleet of 20 ships.

- https://liberalarts.tamu.edu/blog/new-discovery-rocks-the-boat/

Fine historical date variants

Exact dates for Gama, Albuquerque, Hooghly, Xavier and some acquisitions differ among sources. The lesson retains the relevant source attributions; these disagreements are not resolved into a single date.

DAY 18 | TOPIC 172

Indus Valley society, economy, trade and seals

History & Culture | Unit A-1

7. Sources

7.1 Sources

S1

Source: NCERT, *Themes in Indian History, Part I* (Class XII), Theme One "Bricks, Beads and Bones: The Harappan Civilisation". Official file https://ncert.nic.in/textbook/pdf/lehs101.pdf ; text read on IIT Kanpur's SATHEE copy, https://sathee.iitk.ac.in/ncert-books/class-12/themes-in-indian-history/chapter-01-bricks-beads-and-bones-the-harappan-civilisation

Used for: Plants, millets, rare rice, fish, domestic and wild animal bones, archaeo-zoologists; plough models from Cholistan and Banawali, oxen for ploughing; Kalibangan furrows and two crops; semi-arid lands, Shortughai canals not in Punjab or Sind, Dholavira reservoirs, wells; harvesting tools; Chanhudaro (less than 7 ha, Mohenjo-daro 125 ha) and its crafts; bead materials, steatite paste, chipping, flaking, grinding, polishing, drilling, firing carnelian, drills at Chanhudaro, Lothal and Dholavira, bead shapes and decoration; beads taken to urban centres; signs of craft centres and the words on waste; Nageshwar and Balakot shell objects; materials from outside the alluvial plain; Shortughai and lapis lazuli; Lothal and carnelian (Bharuch), steatite (south Rajasthan and north Gujarat), metal (Rajasthan); Khetri copper, steatite micro beads, Ganeshwar-Jodhpura culture; south Indian gold; bullock carts, river and coastal routes; Oman copper, nickel, the black-clay jar; Mesopotamian texts, Magan, Dilmun, Meluhha, its products, land of seafarers, haja-bird; travel by sea, ships on seals; seals at Mesopotamian sites; cylinder seal with humped bull; seals of steatite with animal motifs, line of writing, use of sealings; script undeciphered, not alphabetical, 375 to 400 signs, right to left, about 26 signs at most, inscribed objects; chert weights, binary and decimal, scale-pans; copper tools, copper and bronze vessels, stone blades (figures); burials and grave goods, copper mirrors, precious things not buried; luxuries, faience pots, Kalibangan, gold hoards; uniformity of artefacts and bricks; the "palace"; the "priest-king" and Mesopotamian parallels; three views on rulers; mother goddesses, fire altars, ritual scenes, nature worship, the unicorn, "proto-Shiva", Rudra, lingas, "more speculative"; abandonment by about 1800 BCE, Late Harappan or successor cultures, suggested causes, the unifying element

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S2

Source: NCERT, *Our Pasts I* (Class VI), chapter 3 "In the Earliest Cities", text read on IIT Kanpur's SATHEE copy. https://sathee.iitk.ac.in/ncert-books/class-06/social-science/history-our-past-1/chapter-03-in-the-earliest-cities

Used for: Crops, herding, ber, fish, antelope; things of stone, shell and metal; uses of copper, bronze, gold and silver; tin mixed with copper for bronze; carnelian beads; chert weights; seals of stone, usually rectangular, with animals; red pottery with black designs; faience defined; cotton at Mehrgarh about 7000 years ago and spindle whorls; copper from Rajasthan and possibly Oman, tin from Afghanistan and Iran, gold from Karnataka, precious stones from Gujarat, Iran and Afghanistan; the Lothal tank that may have been a dockyard

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S3

Source: NCERT, *An Introduction to Indian Art, Part I* (Class XI), chapter 2 "Arts of the Indus Valley". https://ncert.nic.in/textbook/pdf/kefa102.pdf

Used for: Seals mostly of steatite, occasionally agate, chert, copper, faience and terracotta; standard square seal of 2 × 2 inches; purpose mainly commercial; seal animals; the seated figure and its animals; script undeciphered; bearded man in soapstone with trefoil shawl, called a priest; mother goddess figures; bead materials and decoration; red pottery and black painted ware

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S4

Source: UNESCO World Heritage Centre, Tentative List, "Archaeological remains of a Harappa Port-Town, Lothal". https://whc.unesco.org/en/tentativelists/5918/

Used for: Basin of 217 m by 26 m identified as a tidal dockyard; seals possibly from the Persian Gulf; bead-making; warehouse with sealings

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S5

Source: Wikipedia, "Lothal" (citing S.R. Rao, *Lothal*, 1985, pp. 28-29 and 35-36; L.S. Leshnik, *American Anthropologist*, 1968; P. Yule, *Lothal*, 1982, p. 31; B. and R. Allchin, *The Rise of Civilization in India and Pakistan*, p. 187). https://en.wikipedia.org/wiki/Lothal

Used for: Basin about 215 m by 35 m; Rao's dockyard identification and the objections of Leshnik and Yule; circular Persian Gulf type seal at Lothal

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S6

Source: Wikipedia, "Meluhha" (citing G. Possehl, *The Indus Civilization*, 2002, pp. 219 and 221; J. McIntosh, *The Ancient Indus Valley*, 2008, p. 46; A. Robinson, *The Indus: Lost Civilizations*, 2015, p. 93; Schoyen Collection MS 2814; Abed and Hellyer, *United Arab Emirates: a new perspective*, 2001, p. 40). https://en.wikipedia.org/wiki/Meluhha

Used for: Meluhha as the Indus region in most scholars' view; Sargon of Akkad (2334 to 2279 BCE) and the ships of Meluhha, Magan and Dilmun; about twenty Indus seals in Mesopotamia, at Ur, Kish and Babylon; Magan in the area of the UAE and Oman

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S7

Source: Wikipedia, "Indus script" (citing I. Mahadevan, 1977, pp. 9-14; B. Wells, 2015, p. 13; G. Possehl, 2002, p. 132). https://en.wikipedia.org/wiki/Indus_script

Used for: Mahadevan's list of 417 signs; Wells's estimate of about 694; average of about five signs; reading from right to left

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S8

Source: Wikipedia, "Pashupati seal" (citing J. Marshall, 1931, pp. 52-57; H. Sullivan, 1964; D. Srinivasan, 1997, p. 181). https://en.wikipedia.org/wiki/Pashupati_seal

Used for: Marshall's "proto-Shiva" proposal; steatite seal from Mohenjo-daro; readings as a goddess and as a buffalo-man

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S9

Source: Encyclopaedia Britannica, "Indus civilization" (summary). https://www.britannica.com/topic/Indus-civilization

Used for: Core period of about 2600 to 1900 BCE

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7. ఆధారాలు 7.1 ఆధారాలు

ఆధారాల పట్టిక, లింకులు ఇంగ్లిష్ వెర్షన్‌లోని 7.1 విభాగంలో ఉన్నవే (S1 నుంచి S9). రెండు వెర్షన్లకూ అవే ఆధారాలు.

Source notes and scope

Harappan economy and raw materials

NCERT supports the material-source matches, craft indicators, subsistence and qualified overseas identifications.

- https://ncert.nic.in/textbook/pdf/lehs101.pdf

Seals, script, hoards and faience

NCERT discusses the script range and direction, gold in hoards, faience distribution and the sender identity conveyed by sealings.

- https://ncert.nic.in/textbook/pdf/lehs101.pdf

Religion and political labels

Priest-king, proto-Shiva and similar labels are interpretations rather than established identities.

- https://ncert.nic.in/textbook/pdf/lehs101.pdf

DAY 18 | TOPIC 173

India's foreign policy: Panchsheel, non-alignment and the present approach

Constitution, Polity, Social Justice & IR | Unit B-6

7. Sources

7.1 Sources

S1

Source: NCERT, *Politics in India since Independence* (Class XII), chapter "India's External Relations" (earlier edition of the file). https://ncert.nic.in/ncerts/l/leps204.pdf

Used for: Nehru's three objectives; the Directive Principle "promote international peace and security"; Nehru's words on avoiding entanglement in power politics; non-alignment as not tying up with military blocs; Bandung, 1955; first NAM summit at Belgrade, September 1961; Nehru, Nkrumah, Nasser, Sukarno and Tito as the core leaders; Panchsheel announced by Nehru and Zhou Enlai on 29 April 1954; the invasion of October 1962, its effect, the no-confidence motion and V.K. Krishna Menon; the 20-year Treaty of Peace and Friendship, August 1971; the Shimla Agreement, 3 July 1972; the "peaceful explosion" of May 1974; the tests of May 1998; "no first use"; the NPT of 1968 and the CTBT not signed

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S2

Source: NCERT, *Politics in India since Independence* (Class XII), chapter "India's External Relations" (current file; read only in part). https://ncert.nic.in/textbook/pdf/leps204.pdf

Used for: The aim to respect the sovereignty of all nations and achieve security through peace, and its echo in the Directive Principles; Nehru's words "We must be friendly to both and yet not join either"

S3

Source: Constitution of India, Article 51, "Promotion of international peace and security", text and drafting history at Constitution of India (constitutionofindia.net). https://www.constitutionofindia.net/articles/article-51-promotion-of-international-peace-and-security/

Used for: The four clauses of Article 51; Draft Article 40, debated on 25 November 1948

S4

Source: "Agreement between the People's Republic of China and the Republic of India on Trade and Intercourse between Tibet Region of China and India", Peking, 29 April 1954, text from the Treaty Database of the People's Republic of China, as reproduced in "The World and Japan" database (University of Tokyo). https://worldjpn.net/documents/texts/CHSC/19540429.T1E.html

Used for: Full title; the preamble and the five principles in their words; place and date of signing; the signatories, N. Raghavan and Chang Han-fu, and their posts; the eight-year term (Article 6)

S5

Source: Encyclopaedia Britannica, "Non-Aligned Movement" (last updated 30 September 2026). https://www.britannica.com/topic/Non-Aligned-Movement

Used for: Non-alignment not meaning passive or neutral; Bandung, April 1955, 29 Asian and African states; the Belgrade Conference of 1961; the five founders; 120 member states; summits usually every three years

S6

Source: Wikipedia, "19th Summit of the Non-Aligned Movement" (citing the official summit programme at nam.go.ug, The Hindu of 20 January 2024 and mnoal.org). https://en.wikipedia.org/wiki/19th_Summit_of_the_Non-Aligned_Movement

Used for: Historical account of the 2024 Kampala programme, theme, Uganda's chairmanship and India's representation by S. Jaishankar. For membership and the next summit, use the 121-member count and the dated supplementary NAM sources below.

S7

Source: Press Information Bureau, "Bharat's Global Footprint", 18 June 2025, Note ID 154680. https://www.pib.gov.in/PressNoteDetails.aspx?ModuleId=3&NoteId=154680&id=154680&reg=48&lang=2

Used for: Neighbourhood First and its principles ("consultative, non-reciprocal and outcome-focused"); Act East upgraded in 2014 from Look East; MAHASAGAR launched in Mauritius in March 2025 and its full form; strategic autonomy; the Quad; BRICS and I2U2 in India-UAE ties; the Voice of Global South Summits; Vaccine Maitri figures

S8

Source: Press Information Bureau, "English translation of Press Statement by Prime Minister during the India - Mauritius Joint Press Statement", 12 March 2025, Release ID 2110746. https://www.pib.gov.in/PressReleasePage.aspx?PRID=2110746&reg=48&lang=2

Used for: Vision SAGAR, "Security and Growth for All in the Region", its foundation laid in Mauritius ten years earlier; MAHASAGAR and its full form; its scope; Mauritius's National Day

S9

Source: Lok Sabha, Unstarred Question No. 3461, answered on 17 March 2021 by the Minister of State (Independent Charge), Ministry of Development of North Eastern Region. https://eparlib.nic.in/bitstream/123456789/993317/1/AU3461.pdf

Used for: Act East as the upgrade of the Look East Policy "promulgated in 1992"; Act East announced in November 2014

S10

Source: Rajiv Bhatia, "Act East Policy", paper hosted by the Embassy of India, Santiago (Ministry of External Affairs mission), 2025 folder. https://www.indianembassysantiago.gov.in/uploads/2025/Act%20East%20Policy%20for%20MEA.pdf

Used for: Look East launched in the early 1990s after the Cold War; Act East announced by Prime Minister Modi at the 9th East Asia Summit in Myanmar on 13 November 2014, with his words; the wider focus and the added defence and maritime security

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S11

Source: Institute for Defence Studies and Analyses (Manohar Parrikar IDSA), "Ask an Expert": "What is Gujral Doctrine?", answer by Ashok K. Behuria (page modified 23 April 2024). https://idsa.in/askanexpert/anil-kumar-reddy-asked-what-is-gujral-doctrine

Used for: The five principles in its words; set out by I.K. Gujral as Minister of External Affairs in his Chatham House speech, London, September 1996; the five neighbours named

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S12

Source: Wikipedia, "India-United States Civil Nuclear Agreement" (citing the MEA's Joint Statement of 18 July 2005 and the US State Department record of the signing, 10 October 2008). https://en.wikipedia.org/wiki/India%E2%80%93United_States_Civil_Nuclear_Agreement

Used for: Joint statement of 18 July 2005; NSG waiver of 6 September 2008; 123 Agreement signed in Washington on 10 October 2008 by Pranab Mukherjee and Condoleezza Rice

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S13

Source: Wikipedia, "Quadrilateral Security Dialogue". https://en.wikipedia.org/wiki/Quadrilateral_Security_Dialogue

Used for: Members; Abe's proposal of early 2007; revival at Manila in November 2017; the in-person summit of 24 September 2021 at Washington; the summit of 21 September 2024 at Wilmington; India as the next host, date not fixed

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S14

Source: Wikipedia, "Shanghai Cooperation Organisation" (citing The Hindu, "India, Pakistan become full members of SCO", 9 June 2017). https://en.wikipedia.org/wiki/Shanghai_Cooperation_Organisation

Used for: Founded at Shanghai on 15 June 2001; India and Pakistan full members at the Astana summit, 9 June 2017

S15

Source: Wikipedia, "G4 nations" (citing the G4 joint press statements of the Brazilian Ministry of Foreign Affairs, 2019 and 2023). https://en.wikipedia.org/wiki/G4_nations

Used for: Members of the G4; mutual support for permanent seats in the Security Council

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S16

Source: Wikipedia, "Foreign relations of India". https://en.wikipedia.org/wiki/Foreign_relations_of_India

Used for: Indian troops in the UN peacekeeping force in Darfur; India's candidature for a permanent seat in the Security Council

S17

Source: Ministry of External Affairs, public diplomacy booklet on the government's diplomacy (foreword by External Affairs Minister Sushma Swaraj). https://mea.gov.in/Images/pdf/Breakthroughdiplomacy.pdf

Used for: "Neighbourhood First" as the government's diplomatic priority; the Prime Minister's invitation to the leaders of all SAARC countries for the oath-taking ceremony of May 2014

S18

Source: Wikipedia, "I2U2 Group" (citing the White House, "Joint Statement of the Leaders of India, Israel, United Arab Emirates, and the United States (I2U2)", 14 July 2022, and The Hindu, 14 July 2022). https://en.wikipedia.org/wiki/I2U2_Group

Used for: The four members; the first leaders' summit, held virtually on 14 July 2022

S19

Source: Wikipedia, "Pokhran" (citing the Nuclear Weapon Archive, "Smiling Buddha, 1974"). https://en.wikipedia.org/wiki/Pokhran

Used for: The first test, 18 May 1974

S20

Source: Wikipedia, "Pokhran-II" (citing the Government of India press release "Planned Series of Nuclear Tests Completed", 13 May 1998, and the Nuclear Weapon Archive). https://en.wikipedia.org/wiki/Pokhran-II

Used for: The tests of 11 and 13 May 1998

S21

Source: Wikipedia, "Indo-Soviet Treaty of Friendship and Cooperation" (citing R.K. Laskar, *India's Foreign Policy: An Introduction*, 2013, and other works). https://en.wikipedia.org/wiki/Indo-Soviet_Treaty_of_Friendship_and_Cooperation

Used for: Signed on 9 August 1971; term of 20 years

S22

Source: United Nations, UN Peacemaker, "Simla Agreement" (India and Pakistan), peace agreement record. https://peacemaker.un.org/indiapakistan-simlaagreement72

Used for: Date of the Shimla Agreement, 2 July 1972

S23

Source: Ministry of Foreign Affairs of Japan, "Press Conference Following the 59th Session of the UN General Assembly", 22 September 2004. https://www.mofa.go.jp/policy/un/press0409.html

Used for: The meeting of the leaders of Brazil, Germany, India and Japan in New York in September 2004, and their agreement to cooperate on UN reform

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S24

Source: Encyclopaedia Britannica, "V.K. Krishna Menon". https://www.britannica.com/biography/V-K-Krishna-Menon

Used for: His full name, Vengalil Krishnan Krishna Menon; Defence Minister from 1957; left the Ministry of Defence in October 1962

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7. ఆధారాలు 7.1 ఆధారాలు

ఆధారాల పట్టిక, లింకులు ఇంగ్లిష్ వెర్షన్‌లోని 7.1 విభాగంలో ఉన్నవే (S1 నుంచి S24). రెండు వెర్షన్లకూ అవే ఆధారాలు.

Source notes and scope

NAM membership

NAM membership became 121 after South Sudan's admission in 2024.

- https://abuja.mofa.go.ug/media/uganda-has-asserted-its-global-presence-just-concluded-summit-g77china-and-non-aligned
- https://statehouse.go.ug/uganda-assumes-non-aligned-movement-chairmanship/

Bandung and Belgrade

Official NAM history supports the 1955 forerunner and the first summit in 1961.

- https://www.nam.go.ug/history

Panchsheel agreement

The MEA treaty copy supports 29 April 1954, the signatories and the distinction between agreement, preamble and political announcement.

- https://www.mea.gov.in/Images/CPV/RTI-V-08-03-2024.pdf
- https://www.pib.gov.in/newsite/erelcontent.aspx?lang=2&reg=48&relid=4934

Article 51 and the 1971 treaty

Official constitutional text confirms arbitration. A contemporaneous diplomatic record confirms the Indo-Soviet treaty's twenty-year duration, not ten.

- https://cdnbbsr.s3waas.gov.in/s380537a945c7aaa788ccfcdf1b99b5d8f/uploads/2023/05/202507082132320966.pdf
- https://history.state.gov/historicaldocuments/frus1969-76v11/d116

Look East and Act East dates

The parliamentary reply uses 1992 for Look East and 2014 for Act East. This source convention is used in the matching question; 1991 is also commonly given for the beginning of Look East.

- https://www.pib.gov.in/Pressreleaseshare.aspx?PRID=1705487&lang=2&reg=48

MAHASAGAR and BRICS

MEA and PMO material supports the Mauritius announcement in 2025 and the New Delhi BRICS summit on 12–13 September 2026.

- https://www.mea.gov.in/outoging-visit-detail.htm?39163/Transcript+of+Special+Briefing+by+MEA+on+Prime+Ministers+State+Visit+to+Mauritius+March+12+2025
- https://www.pmindia.gov.in/en/news_updates/brics-new-delhi-declaration-building-for-resilience-innovation-cooperation-and-sustainability-september-12-2026/?comment=disable

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Neutrality and future summit dates

Non-alignment, neutrality and isolationism have different meanings. As stated in the President’s address of 15 October 2026, the 20th NAM Summit is scheduled in Tashkent, Uzbekistan, in 2027; the exact day and month are not specified. An exact next Quad summit date is not established by the cited sources.

- https://www.nam.go.ug/working-mechanisms
- https://www.mea.gov.in/advanced-search-list.htm?keysrch=quad+fo
- https://www.president.uz/en/lists/view/9720

Supplementary sources

The 20th NAM Summit is scheduled in Tashkent, Uzbekistan, in 2027. It has not yet taken place. The Presidency address dated 15 October 2026 does not specify the exact day and month. For the 2024 Kampala summit, 15–20 January describes the full programme; the Heads of State and Government meeting was 19–20 January.

PA1 Uzbekistan Presidency

Address at the Seventh CICA Summit, 15 October 2026. Supports the Tashkent host and 2027 year; no exact day or month is stated.

https://www.president.uz/en/lists/view/9720

PA2 Ministry of External Affairs

India–Uganda bilateral relations. Leaders' meeting: 19–20 January 2024; ministerial meeting: 17–18 January.

https://www.mea.gov.in/Portal/ForeignRelation/India-Uganda26.pdf

PA3 Official NAM programme announcement

Media-launch announcement for the 19th NAM Summit. Full Kampala programme: 15–20 January 2024.

https://nam.go.ug/media-launch-19th-non-aligned-movement-nam-summit

తెలుగు స్పష్టీకరణ: 20వ అలీనోద్యమ శిఖరాగ్ర సమావేశం 2027లో ఉజ్బెకిస్తాన్‌లోని తాష్కెంట్‌లో నిర్వహించనున్నారు; అది ఇంకా జరగలేదు. ఖచ్చితమైన రోజు, నెలను ఆ ప్రసంగంలో పేర్కొనలేదు. కంపాలాలో 2024 జనవరి 15–20 పూర్తి కార్యక్రమానికి సంబంధించిన తేదీలు; దేశాధినేతలు, ప్రభుత్వాధినేతల సమావేశం జనవరి 19, 20 తేదీల్లో జరిగింది.

Additional primary reference

A1 Jawaharlal Nehru

Letter to President S. Radhakrishnan, "Krishna Menon's Resignation", 7 November 1962. Selected Works of Jawaharlal Nehru, Second Series, Volume 79, page 603; reproduced by The Nehru Archive.

https://nehruarchive.in/documents/to-s-radhakrishnan-krishna-menons-resignation-7-november-1962-z4j5y

Used for: The letter discusses Menon's offer to resign from Government and Nehru's proposed acceptance in November 1962. This is distinct from the earlier change in the defence portfolio. The timeline uses the year 1962 for the invasion and cabinet departure, rather than assigning both events to October.

DAY 18 | TOPIC 174

National income: output, income and expenditure methods, compilation and data sources

Indian & AP Economy and Planning | Unit C-2

7. Sources

7.1 Sources

S1

Source: NCERT, *Introductory Macroeconomics* (Class XII), Chapter 2, "National Income Accounting", Sections 2.2 to 2.3, Tables 2.1 to 2.6 and footnote 4. https://ncert.nic.in/textbook/pdf/leec102.pdf

Used for: Circular flow between firms and households; the three methods and the sentence that each gives the same GDP; definitions of value added and intermediate goods; the farmer and baker example (Rs 100, 50, 200, 300, 150, 250) and double counting; GVA, NVA and GDP formulas; output as sales plus change in inventories; inventories and the shirt example; expenditure method as the demand side, final expenditure, categories C, I, G, X and GDP ≡ C + I + G + X - M; income method, GDP ≡ W + P + In + R and the cotton and cloth example; the simplified non-wage distribution (the formal operating-surplus definition is supplied by SNA rather than this shorthand); Table 2.6 rows (PFCE, GFCE, GFCF, change in stocks, valuables, discrepancies); NFIA, GNP ≡ GDP + NFIA, depreciation, net indirect taxes and NNP at factor cost as National Income

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S2

Source: National Statistics Office, MoSPI, "Press Note on New Series of Gross Domestic Product (GDP) Estimates with Base Year 2022-23", 27 February 2026. https://static.pib.gov.in/WriteReadData/specificdocs/documents/2026/feb/doc2026227806401.pdf

Used for: Release of the new series; 2022-23 as "a recent normal year (after COVID)"; the list of methodological changes (SUT integration, double deflation in agriculture and manufacturing, GST and administrative data); formulas for GVA by the production and the income approach and GDP; MCA data and ASI 2023-24; expenditure components; the discrepancies line; 2025-26 SAE GDP Rs 345.47 lakh crore (8.6 per cent) and Rs 322.58 lakh crore (7.6 per cent); annual and base year revisions

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S3

Source: National Statistics Office, MoSPI, *Sources and Methods for Compilation of National Accounts Statistics* (base year 2022-23), September 2026, Chapter 1 and the first part of Chapter 2 (read up to about page 35). https://www.mospi.gov.in/uploads/announcements/announcements_1789988970816_cf2e691e-2796-4e69-ba44-6152e1896969_Sources_and_Methods_for_compilation_of_National_Accounts_Statistics_(1).pdf

Used for: National Accounts Division of NSO, NSO formed in 2019 from CSO and NSSO; release dates 27 February and 31 August 2026; Gross Capital Formation as GFCF, CIS and valuables; pension entitlements in compensation of employees; labour input method with ASUSE and PLFS, except agriculture and construction; MGT-7 and MGT-7A filings; ASI for registered manufacturing and for double deflation; HCES for PFCE; GST and other administrative data for quarterly estimates; current price annual estimates integrated with SUT and the discrepancy eliminated by reconciliation at the final stage; GDP as the sum of GVA at basic prices plus product taxes less product subsidies

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S4

Source: MoSPI, press release "National Accounts Statistics - 2026 publication", 31 August 2026. https://www.mospi.gov.in/uploads/latestReleases/latest_release_1788171660220_f2a7f5ed-3ce3-45cc-a5b2-eebc84623a01_Final_Press_Release_on_NAS_2026.pdf

Used for: 2025-26 Provisional Estimates as released earlier (Rs 3,46,35,638 crore, 8.9 per cent; Rs 3,23,12,034 crore, 7.7 per cent) and as updated (Rs 3,45,36,796 crore, 8.6 per cent; Rs 3,24,70,100 crore, 7.8 per cent)

S5

Source: MoSPI, Press Note on the change in the release calendar of the Provisional Estimates, 12 May 2026. https://www.mospi.gov.in/uploads/latestReleases/Press%20Note_Release%20Calendar%20Change.pdf

Used for: Provisional Estimates moved from the last working day of May to 7 June; 5 June 2026 for 2025-26; reasons (filing of company results by 31 May, March government accounts)

S6

Source: MoSPI, discussion paper "Methodological Improvements in compilation of aggregates of National Accounts (Production/Income Approach)" (issued before the 27 February 2026 release). https://www.mospi.gov.in/uploads/announcements/announcements_1763725600839_38257510-c97c-4d03-993e-ccbbf873bc83_Discussion_Paper_NAD.pdf

Used for: Estimates compiled industry-wise and institution-wise; agriculture by the direct (bottom-up) approach; general government output valued at the sum of costs (compensation of employees, intermediate consumption and CFC) and its net value added taken as compensation of employees; construction by commodity flow; MCA-21 data for private corporations; PLFS and ASUSE; agricultural production data from ministries and prices from State Directorates of Economics and Statistics

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S7

Source: National Statistics Office, MoSPI, Press Note "First Advance Estimates of Gross Domestic Product, 2025-26", 7 January 2026. https://static.pib.gov.in/WriteReadData/specificdocs/documents/2026/jan/doc202617752701.pdf

Used for: Release date; benchmark-indicator method; Second Advance Estimates due on 27 February 2026; indicators (IIP, crop estimates of the Ministry of Agriculture and Farmers Welfare, GST data, listed company results, government accounts); GDP by the production and the expenditure approach and the discrepancy as "the gap between GDP by Production and Expenditure approach"

S8

Source: National Statistics Office, MoSPI, Press Note "Quarterly Estimates of Gross Domestic Product for the First Quarter (April-June) of 2026-27", 31 August 2026. https://www.mospi.gov.in/uploads/latestreleasesfiles/1788174301107-Press%20Note%20on%20GDP%20Estimates%20for%20Q1%202026-27.pdf

Used for: Release date of the April to June 2026 estimates; next quarterly release on 30 November 2026; Provisional Estimates of 2025-26 released on 5 June 2026 and updated in the NAS publication; indicators (advance estimates of crop production, IIP, GST data, results of listed companies)

S9

Source: United Nations Statistical Commission, 39th session (2008), background document "Updated System of National Accounts (SNA): Chapter 7: The distribution of income accounts". https://unstats.un.org/unsd/statcom/doc08/SNA-Chapter7.pdf

Used for: Definitions of compensation of employees (paragraph 7.5), operating surplus and mixed income (paragraphs 7.8, 7.9 and 7.12); mixed income in unincorporated enterprises owned by households, with the owner's remuneration not separable from the return as entrepreneur; interest and rents payable out of operating surplus (paragraph 7.23)

S10

Source: Central Statistics Office, MoSPI, methodology document on the new series with base year 2011-12 (file "Changes in Methodology NS 2011-12 March 2015"), paragraph 3.9. https://mospi.gov.in/sites/default/files/press_releases_statements/Changes in Methodology NS 2011-12 March 2015.pdf

Used for: MCA21 as the database created under an e-governance project of the Ministry of Corporate Affairs, used for company accounts

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S11

Source: MoSPI, Press Note "Provisional Estimates of Annual Gross Domestic Product for 2025-26 and Quarterly Estimates of Gross Domestic Product for the Fourth Quarter (January-March) of 2025-26", 5 June 2026. https://static.pib.gov.in/WriteReadData/specificdocs/documents/2026/jun/doc202665884801.pdf

Used for: Release date of the 2025-26 Provisional Estimates; GDP at current prices Rs 346.36 lakh crore (8.9 per cent) and at constant prices Rs 323.12 lakh crore (7.7 per cent), matching the "previously released" figures in the NAS 2026 press release; shares of the expenditure components in GDP at current prices for 2025-26 (PFCE 56.7, GFCE 10.7, GFCF 31.9, CIS 1.2, valuables 2.0, exports 22.2, imports 24.4, discrepancies -0.3 per cent)

S12

Source: MoSPI, Press Note on the change in the release calendar of the Provisional Estimates, 12 May 2026 (same document as S5) and MoSPI, *Sources and Methods* 2026, paragraph 1.12.3(A)(IV) (same document as S3)

Used for: Release on 7 June "or the previous working day if 7th June is a holiday"; full name of ASUSE, the Annual Survey of Unincorporated Sector Enterprises

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7. ఆధారాలు 7.1 ఆధారాలు

ఆధారాల పట్టిక, లింకులు ఇంగ్లిష్ వెర్షన్‌లోని 7.1 విభాగంలో ఉన్నవే (S1 నుంచి S12). రెండు వెర్షన్లకూ అవే ఆధారాలు.

Source notes and scope

GDP base year 2022–23

The official 27 February 2026 press note confirms the new base-year series.

- https://www.mospi.gov.in/uploads/latestReleases/latest_release_1772189865181_f040336d-bc57-4aed-b80f-586d9ccb279e_Press_Note_on_New_Series_of_GDP_Estimates_with_Base_Year_2022-23_27022026.pdf

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Updated annual GDP estimate

The 31 August 2026 release confirms current-price GDP of ₹3,45,36,796 crore with 8.6% growth and constant-price GDP of ₹3,24,70,100 crore with 7.8% growth.

- https://www.mospi.gov.in/uploads/latestReleases/latest_release_1788171660220_f2a7f5ed-3ce3-45cc-a5b2-eebc84623a01_Final_Press_Release_on_NAS_2026.pdf

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Provisional release calendar

The official rule is June 7 or the preceding working day, giving June 5 in 2026.

- https://www.mospi.gov.in/uploads/latestReleases/Press%20Note_Release%20Calendar%20Change.pdf

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Income identities and numerical question

Where consumption of fixed capital is added separately, operating surplus and mixed income are net measures. The simplified wage-profit-interest-rent identity assumes zero depreciation and zero net taxes. Q2 gives ₹5,500 crore; the worked National Income example gives ₹1,220 crore.

- https://unstats.un.org/unsd/nationalaccount/docs/SNA2008.pdf

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Additional primary references

A1 United Nations Statistics Division

System of National Accounts, Chapter 7: The distribution of income accounts.

https://unstats.un.org/unsd/statcom/doc08/SNA-Chapter7.pdf

Used for: Compensation of employees, operating surplus, mixed income, property-income flows and gross/net distinctions.

A2 International Monetary Fund

System of Macroeconomic Accounts Statistics: An Overview, Chapter 2, Gross Domestic Product.

https://www.elibrary.imf.org/display/book/9781589066205/ch002.xml

Used for: GDP approaches; gross capital formation, including public investment, and government final consumption.

A3 Ministry of Statistics and Programme Implementation

National Accounts Statistics: Sources and Methods, 2012.

https://www.mospi.gov.in/sites/default/files/publication_reports/sources_method_2012%20%281%29.pdf

Used for: Income-account components and valuation framework. Current 2026 statistical series are documented separately in the original source records.

DAY 18 | TOPIC 175

National parks, wildlife sanctuaries and tiger reserves of Andhra Pradesh

Geography | Unit D-2

7. Sources

7.1 Sources

S1

Source: The Wild Life (Protection) Act, 1972 (Act No. 53 of 1972), text as on 5 June 2025, India Code. https://www.indiacode.nic.in/bitstream/123456789/1726/1/aA1972-53.pdf

Used for: Section 18(1) on an intention notification; section 26A on final sanctuary declaration, including subsection (1)(b) for reserve forests and territorial waters; section 33(d) on grazing in sanctuaries; section 35(1), 35(6) and 35(7) on national parks; section 36A(1) on conservation reserves; section 36C(1) on community reserves; section 38L(1) on the NTCA; the Wild Life (Protection) Amendment Act, 2022 among the amending Acts

S2

Source: Section 38V of the Wild Life (Protection) Act, 1972, text on LawX (a mirror of the Act). https://lawx.in/acts/section/125/1123/9644

Used for: Section 38V(1): the State Government notifies a tiger reserve on the recommendation of the Tiger Conservation Authority; 38V(3) Tiger Conservation Plan; 38V(4) interests of the people and the Explanation on core or critical tiger habitat and buffer or peripheral area; 38V(5) conditions for resettlement, including the consent of the Gram Sabha

S3

Source: Andhra Pradesh Forest Department, "Wildlife" introduction page (undated; read on 18 October 2026). https://forests.ap.gov.in/wild-intro.php

Used for: 1 tiger reserve, 1 elephant reserve (Koundinya Sanctuary and Rayala Elephant Reserve), 1 biosphere reserve (Seshachalam), 3 national parks and 13 wildlife sanctuaries; notified forest of 36,914.69 sq km, 22.46 per cent of a geographical area given as 1,64,325.89 sq km; 8,139.89 sq km of forest under the protected area network, given as 22.05 per cent; red sanders, Great Indian Bustard, Lesser Florican and Jerdon's Courser among the State's species

S4

Source: Ministry of Environment, Forest and Climate Change (MoEFCC), EIACP protected area information sheet "Wildlife Sanctuaries" (source line: MoEFCC and State Forest Departments; data as on February 2025). https://eiacp.moef.gov.in/file/PA_Information_WLS1764326529117658.pdf

Used for: 574 sanctuaries in India covering 1,27,241.24 sq km; the 13 sanctuaries of Andhra Pradesh with their areas, 6,771.3974 sq km in all; notification years of Coringa (1978) and Rollapadu (1988)

S5

Source: National Tiger Conservation Authority, "Tiger Reserves" (page last updated on 15 October 2026). https://ntca.gov.in/tiger-reserves/ ; detailed area table: https://backend.ntca.gov.in/about-us/

Used for: 58 tiger reserves; Nagarjunsagar Srisailam the only one in Andhra Pradesh, core 2,595.72 sq km, buffer 700.59 sq km, total 3,296.31 sq km, the largest total and core area in the table; Amrabad (Telangana), 2,611.39 sq km

S6

Source: Lok Sabha, Unstarred Question No. 953, "Decreasing Tiger Population", answered on 2 December 2024 by the Ministry of Environment, Forest and Climate Change. https://eparlib.sansad.in/bitstream/123456789/2983774/1/AU953_jjSIPO.pdf

Used for: Tiger estimates for Andhra Pradesh (95, 72, 68, 48, 63) and India (1,411, 1,706, 2,226, 2,967, 3,682) for 2006 to 2022; 2022 as the fifth cycle of the All India Tiger Estimation

S7

Source: Wikipedia, "List of Ramsar sites in India" (citing the Ramsar Sites Information Service, rsis.ramsar.org, retrieved 5 June 2026). https://en.wikipedia.org/wiki/List_of_Ramsar_sites_in_India

Used for: 100 Ramsar sites in India as on 5 June 2026; Kolleru Lake designated on 19 August 2002, 901 sq km, the only site listed for Andhra Pradesh

S8

Source: Wikipedia, "Andhra Pradesh Forest Department" (table of protected areas, without citations). https://en.wikipedia.org/wiki/Andhra_Pradesh_Forest_Department

Used for: Areas of the national parks: Papikonda 1,012.86 sq km, Sri Venkateswara 525.97 sq km, Rajiv Gandhi (Rameswaram) 2.5 sq km; the names Kolleru Bird Sanctuary and Pulicat Lake Bird Sanctuary; the second figures for Pulicat Lake (500), Kambalakonda (70.70) and Nagarjunasagar-Srisailam (3,568); the footnote naming Papikonda Wildlife Sanctuary

S9

Source: Wikipedia, "Rollapadu Wildlife Sanctuary" (citing the Andhra Pradesh Forest Department page "Rollapadu Wildlife Sanctuary", and K. Thulsi Rao and S.M.M. Javed, *Zoos' Print Journal* 20(11): 2053 to 2058, 2005). https://en.wikipedia.org/wiki/Rollapadu_Wildlife_Sanctuary

Used for: Nandyal district, about 40 km from Nandyal; 6.14 sq km; 1988; the Great Indian Bustard, Critically Endangered, and the Lesser Florican; mainly grassland on an undulating plain

S10

Source: Wikipedia, "Sri Lankamalleswara Wildlife Sanctuary" (citing Zee News, "Endangered Jerdon's Courser on Centre's priority list", 13 February 2011). https://en.wikipedia.org/wiki/Sri_Lankamalleswara_Wildlife_Sanctuary

Used for: Kadapa district; 464.42 sq km; Jerdon's Courser, Critically Endangered, discovered by Thomas C. Jerdon in 1848, thought extinct and rediscovered in 1986; dry deciduous mixed thorn forest with deep gorges

S11

Source: Wikipedia, "Coringa Wildlife Sanctuary" (citing Indian Bird Conservation Network, "Important Bird Areas in India: Andhra Pradesh"; Andhra Pradesh Forest Department page "Coringa Wildlife Sanctuary"; East Godavari District Web Portal). https://en.wikipedia.org/wiki/Coringa_Wildlife_Sanctuary

Used for: East Godavari district in the older portal; part of the Godavari estuary on the branches of the Godavari and the Gautami; fishing cat and smooth-coated otter; established on 5 July 1978

S12

Source: Wikipedia, "Kambalakonda Wildlife Sanctuary" (citing the Andhra Pradesh Forest Department page "Kambalakonda"). https://en.wikipedia.org/wiki/Kambalakonda_Wildlife_Sanctuary

Used for: Visakhapatnam district; 70.70 sq km; dry evergreen forest mixed with scrub and meadows on hilly terrain; the Indian leopard as indicator species; sambar, spotted deer and Indian pangolin

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S13

Source: Wikipedia, "Sri Venkateswara National Park" (citing the Andhra Pradesh Forest Department page "Sri Venkateswara National Park"). https://en.wikipedia.org/wiki/Sri_Venkateswara_National_Park

Used for: Tirupati district; 353 sq km; national park established in September 1989; Seshachalam Hills of the Eastern Ghats and the Tirumala Hills; red sanders and endemic plants; Indian golden gecko; slender loris

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S14

Source: Andhra Pradesh Forest Department, "Coringa Wildlife Sanctuary" page (undated; read on 18 October 2026). https://forests.ap.gov.in/sanctuaries.php

Used for: Tidal mangrove forest where the Godavari joins the backwaters of the Bay of Bengal; "The sea coast of the Coringa Wildlife Sanctuary is a breeding ground for Olive ridley turtles"; fishing cat among the indicator species; legal status dated 05.07.1978

S15

Source: Andhra Pradesh Forest Department, "Kambalakonda" page (undated; read on 18 October 2026). https://forests.ap.gov.in/kambalakonda.php

Used for: Dry evergreen forest mixed with scrub and meadows; leopard as the indicator species

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S16

Source: Andhra Pradesh Forest Department, "Rollapadu" page (undated; read on 18 October 2026). https://forests.ap.gov.in/rollapadu.php

Used for: Open grassland with thorny bushes; the Great Indian Bustard among the indicator species; the Lesser Florican among its birds; legal status dated 23-04-1988

S17

Source: Andhra Pradesh Forest Department, "Sri Lankamalleswara" page (undated; read on 18 October 2026). https://forests.ap.gov.in/lankamalleswara.php

Used for: Jerdon's (double-banded) courser as the indicator species, rediscovered in 1986 near Reddipally village of Kadapa district

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S18

Source: Kakinada District, Government of Andhra Pradesh, "Eco Tourism" page (read on 18 October 2026). https://kakinada.ap.gov.in/eco-tourism/

Used for: Coringa Wildlife Sanctuary described on the Kakinada district site, near Kakinada, the headquarters of Kakinada district

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S19

Source: Ramsar Sites Information Service, "Kolleru Lake" (site 1209). https://rsis.ramsar.org/ris/1209

Used for: Kolleru Lake, Andhra Pradesh, designated on 19 August 2002; 90,100 ha (901 sq km)

S20

Source: National Tiger Conservation Authority, "Status of Tigers, Co-predators and Prey in India, 2018", Table 3.1. https://ntca.gov.in/assets/uploads/Reports/AITM/status.pdf

Used for: Andhra Pradesh estimates 95 (2006), 72 (2010), 68 (2014) and 48 (2018); no Telangana estimate before 2018 (26 in 2018); the note that the 2018 Andhra Pradesh and Telangana estimates are combined for comparison with earlier Andhra Pradesh estimates

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7. ఆధారాలు 7.1 ఆధారాలు

ఆధారాల పట్టిక, లింకులు ఇంగ్లిష్ వెర్షన్‌లోని 7.1 విభాగంలో ఉన్నవే (S1 నుంచి S20). రెండు వెర్షన్లకూ అవే ఆధారాలు.

Source notes and scope

Wildlife law

Section 18 concerns the intention to constitute a sanctuary; section 26A concerns final declaration, including the reserve-forest and territorial-water route under subsection (1)(b). Sections 35(1) and 35(4) distinguish national-park intention and final declaration. Restricted permit exceptions and statutory rights remain relevant. Grazing is prohibited in national parks. The State Government declares tiger reserves on NTCA recommendation.

- https://www.indiacode.nic.in/bitstream/123456789/1726/1/aA1972-53.pdf

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NTCA count and reserve areas

The NTCA table updated on 15 October 2026 lists 58 tiger reserves. NSTR's core plus buffer equals 3,296.31 sq km and is the largest in that table. Amrabad is in Telangana. The separately notified sanctuary area is a different legal-area measure.

- https://ntca.gov.in/tiger-reserves/
- https://backend.ntca.gov.in/about-us/

Sri Venkateswara park area

Use the gazette's 353.63 sq km. The historical wider-sanctuary figure 525.97 is not an alternative park area; an older WII assessment gives 353.62.

- https://www.moef.gov.in/uploads/2021/06/sri-venkateshwara.pdf
- https://moef.gov.in/uploads/2021/03/Draft_Minutes_45thECM.pdf

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AP sanctuary areas

The official indexed table confirms the named entries, including Pulicat 600, the NSTR sanctuary 2,131.31 and Kambalakonda 71.39. Rounded rows total 6,771.40; the underlying official total is 6,771.3974 sq km.

- https://eiacp.moef.gov.in/file/PA_Information_WLS1764326529117658.pdf

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Sanctuary-species matches

Official tourism, botanical, gazette and forest-clearance sources support the four tested associations. These do not assert a recent population census for each species.

- https://www.incredibleindia.gov.in/en/andhra-pradesh/kurnool/rollapadu-wildlife-sanctuary
- https://bsi.gov.in/uploads/documents/publications/e-publications/hindi/Flora_of_Sri_Lankamalleshwara_Wildlife_Sanctuary_compressed_%281%29.pdf
- https://www.moef.gov.in/uploads/2017/06/Kambalakonda%20Wildlife%20Sanctuary%2C%20Andhra%20Pradesh.pdf
- https://forestsclearance.nic.in/PartIIReport_A.aspx?pid=FP%2FAP%2FROAD%2F154254%2F2022

AP district count

Official district history confirms the change from 26 to 28, effective 31 December 2025.

- https://allurisitharamaraju.ap.gov.in/history/

India's 100 Ramsar sites

PIB and Ramsar identify Surha Tal as India’s hundredth Ramsar site on 5 June 2026. This count applies to that date.

- https://www.pib.gov.in/PressReleasePage.aspx?PRID=2269189&lang=1&reg=6
- https://www.ramsar.org/fr/news/et-de-cent-linde-designe-sa-100e-zone-humide-dimportance-internationale

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Forest statistics and local detail

The forest figures and local details remain attributed to the AP Forest source. The percentages are arithmetic calculations from those figures; not every local descriptive claim has separate corroboration.

- https://forests.ap.gov.in/wild-intro.php

DAY 18 | TOPIC 176

Air pollution: pollutants, standards and the Air Quality Index

Science & Technology | Item 22

7. Sources

7.1 Sources

S1

Source: Central Pollution Control Board, "National Ambient Air Quality Standards", notification No. B-29016/20/90/PCI-L dated 18 November 2009 (copy hosted by The Singareni Collieries Company Ltd). https://scclmines.com/env/docs/naaqs-2009.pdf

Used for: Date, number and immediate effect; issued under section 16(2)(h) of the Air Act, 1981 (Act No. 14 of 1981); supersedes the notifications of 11 April 1994 and 14 October 1998; the twelve pollutants with all their standards for both kinds of area; the units

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S2

Source: Arthapedia (Indian Economic Service), "National Air Quality Index", contributed by M Rahul (citing the Ministry of Environment and Forests press release of 17 October 2014 and the CPCB AQI page). https://ies.gov.in/arthapedia/concept/national-air-quality-index

Used for: Launch on 17 October 2014 under the Swachh Bharat Mission; "One Number- One Colour-One Description"; the eight pollutants; the six categories, ranges and health impacts; the breakpoint table; the sub-index, worst sub-index, minimum of three pollutants including PM2.5 or PM10, and 16 hours of data

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S3

Source: Central Pollution Control Board, "National Air Quality Index", report CUPS/82/2014-15, October 2014. https://airquality.cpcb.gov.in/ccr_docs/FINAL-REPORT_AQI_.pdf

Used for: Sub-indices by linear interpolation between breakpoints; final AQI as the maximum of the sub-indices; the eight pollutants and six index ranges

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S4

Source: NCERT, *Biology* (Class XII), Chapter 16, "Environmental Issues", section 16.1, "Air Pollution and Its Control" (chapter no longer in the current syllabus), as reproduced on SATHEE, IIT Kanpur. https://sathee.iitk.ac.in/dl-sathee/class-12/neet-nb-bio-12/bio-12-chapter-16-enviromental-issues

Used for: Definition of pollution and pollutants; air pollutants injure all living organisms and the factors that decide the harm; electrostatic precipitator (over 99 per cent of particulate matter from a thermal power plant); scrubber (water or lime, sulphur dioxide); the CPCB view that PM2.5 causes the greatest harm; catalytic converter (platinum-palladium and rhodium, the three conversions, unleaded petrol); Air Act amended in 1987 to include noise

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S5

Source: Encyclopaedia Britannica, "smog". https://www.britannica.com/science/smog

Used for: Ground-level ozone formed by sunlight acting on nitrogen oxides and hydrocarbons, and its effects; sulfurous (London-type) smog from sulphur oxides from coal; photochemical (Los Angeles-type) smog without smoke or fog, from nitrogen oxides and hydrocarbons in sunlight producing ozone

S6

Source: Encyclopaedia Britannica, "acid rain". https://www.britannica.com/science/acid-rain

Used for: Precipitation with a pH of about 5.2 or below; produced mainly from sulphur dioxide and nitrogen oxides; lower pH of surface waters and lower biodiversity; plants more open to disease; stone buildings worn away

S7

Source: NCERT, *Chemistry* (Class XI), Chapter 14, "Environmental Chemistry" (chapter no longer in the current syllabus), as reproduced on SATHEE, IIT Kanpur. https://sathee.iitk.ac.in/dl-sathee/class-11/jee-nb-che-11/chemistry-11-chapter-14-environmental-chemistry

Used for: Classical (reducing) smog of smoke, fog and sulphur dioxide in a cool, humid climate; photochemical (oxidising) smog in a warm, dry, sunny climate, with PAN; normal rain water at pH 5.6 from dissolved carbon dioxide, and rain below pH 5.6 called acid rain; the Taj Mahal: sulphur and nitrogen oxides around Agra, acid rain reacting with the marble, loss of lustre and colour, the action plan of 1995 for the Taj Trapezium

S8

Source: World Health Organization, "New WHO Global Air Quality Guidelines aim to save millions of lives from air pollution", news release, 22 September 2021. https://www.who.int/news/item/22-09-2021-new-who-global-air-quality-guidelines-aim-to-save-millions-of-lives-from-air-pollution

Used for: Date of release; the six pollutants; PM2.5 and PM10 penetrate deep into the lungs and PM2.5 can enter the bloodstream

S9

Source: World Health Organization, "Ambient (outdoor) air quality and health", fact sheet, 24 October 2024. https://www.who.int/news-room/fact-sheets/detail/ambient-(outdoor)-air-quality-and-health

Used for: Carbon monoxide from incomplete burning of fuel, nitrogen dioxide from fuel burnt in transport and industry, sulphur dioxide from coal and oil and the smelting of sulphur-bearing ores

S10

Source: Wikipedia, "Particulates" (citing WHO, *WHO global air quality guidelines: particulate matter (PM2.5 and PM10), ozone, nitrogen dioxide, sulfur dioxide and carbon monoxide*, 2021, p. 136, ISBN 978-92-4-003422-8). https://en.wikipedia.org/wiki/Particulates

Used for: WHO 2021 guideline values: PM2.5 5 µg/m3 annual (lowered from 10) and 15 µg/m3 for 24 hours; PM10 15 µg/m3 annual and 45 µg/m3 for 24 hours; definitions of PM10 and PM2.5 by size

S11

Source: Press Information Bureau, "Year-end Review 2024: Ministry of Environment, Forest and Climate Change". https://www.pib.gov.in/PressReleasePage.aspx?PRID=2088406&reg=48&lang=2

Used for: NCAP of 2019: 130 cities in 24 States and Union territories; target of up to 40 per cent reduction in particulate matter by 2025-26 against 2017-18; Rs 11,200 crore

S12

Source: Wikipedia, "Air pollution in India" (citing India Environment Portal, "National Clean Air Programme", 2019; the Supreme Court's order in *M.C. Mehta v. Union of India*, 2016; CPCB key findings). https://en.wikipedia.org/wiki/Air_pollution_in_India

Used for: NCAP's first tentative target of 20 to 30 per cent in PM2.5 and PM10 by 2024, base year 2017, in 102 cities; GRAP approved by the Supreme Court in 2016, implemented first by EPCA and since 2021 by the CAQM; GRAP stages; higher winter particulate levels with lower mixing heights and calmer conditions

S13

Source: Wikipedia, "Air pollution in Delhi" (citing the news report "Air pollution: Centre issues ordinance to form new commission to replace EPCA"). https://en.wikipedia.org/wiki/Air_pollution_in_Delhi

Used for: Commission for Air Quality Management in the NCR and adjoining areas set up in October 2020 by an ordinance, to replace EPCA

S14

Source: Wikipedia, "Air (Prevention and Control of Pollution) Act, 1981" (citing the text of Act No. 14 of 1981 formerly on envfor.nic.in, and the Ministry of Environment and Forests page "Air Pollution"). https://en.wikipedia.org/wiki/Air_(Prevention_and_Control_of_Pollution)_Act,_1981

Used for: Act No. 14 of 1981; enacted on 29 March 1981; amended in 1987

S15

Source: UNEP Law and Environment Assistance Platform (LEAP), text of the CPCB notification No. B-29016/20/90/PCI-L of 18 November 2009, "National Ambient Air Quality Standards". https://leap.unep.org/en/akn/in/act/2009/b-29016-20-90-pci-l/eng%402009-11-18

Used for: Second copy of the notification: number, date, issued under section 16(2)(h) of the Air Act, 1981; twelve pollutants; the annual, 24-hour, 8-hour and 1-hour values for industrial, residential, rural and other areas

S16

Source: Centre for Science and Environment, "CSE welcomes launch of the national air quality index by the Union environment minister", press release, New Delhi, 17 October 2014. https://www.cseindia.org/cse-welcomes-launch-of-the-national-air-quality-index-by-the-union-environment-minister-5557

Used for: Launch of the National Air Quality Index on 17 October 2014 by the Union Minister for Environment and Forests

S17

Source: Shardul Amarchand Mangaldas and Co, "CAQM's revised Graded Response Action Plan for Delhi NCR", 31 August 2022. https://www.amsshardul.com/insight/caqms-revised-graded-response-action-plan-for-delhi-ncr/

Used for: Revised GRAP in force from 1 October 2022; Stage I (Poor, 201 to 300), Stage II (Very poor, 301 to 400), Stage III (Severe, 401 to 450), Stage IV (Severe+, above 450); the CAQM Act, 2021

S18

Source: PRS Legislative Research, "The Commission for Air Quality Management in National Capital Region and Adjoining Areas Bill, 2021". https://prsindia.org/billtrack/the-commission-for-air-quality-management-in-national-capital-region-and-adjoining-areas-bill-2021

Used for: Ordinance of October 2020; Bill passed by the Lok Sabha on 4 August 2021 and the Rajya Sabha on 5 August 2021; EPCA (set up in 1998) dissolved; adjoining areas in Haryana, Punjab, Rajasthan and Uttar Pradesh

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S19

Source: Wikipedia, "Bharat stage emission standards" (citing The Hindu, "SC bans sale of BS-IV vehicles from 2020"). https://en.wikipedia.org/wiki/Bharat_stage_emission_standards

Used for: Only BS-VI vehicles to be made, sold and registered from 1 April 2020; BS-V skipped

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S20

Source: Wikipedia, "Ministry of Environment, Forest and Climate Change" (citing The Economic Times, "Ministry of environment and forests undergoes a nomenclature change", 28 May 2014). https://en.wikipedia.org/wiki/Ministry_of_Environment,_Forest_and_Climate_Change

Used for: The Ministry of Environment and Forests renamed the Ministry of Environment, Forest and Climate Change in May 2014

S21

Source: Press Information Bureau, photo release of 6 April 2015: the Prime Minister launches the National Air Quality Index. https://archive.pib.gov.in/archive2/photoright.aspx?phid=63824

Used for: The formal launch by the Prime Minister on 6 April 2015

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7. ఆధారాలు 7.1 ఆధారాలు

ఆధారాల పట్టిక, లింకులు ఇంగ్లిష్ వెర్షన్‌లోని 7.1 విభాగంలో ఉన్నవే (S1 నుంచి S21). రెండు వెర్షన్లకూ అవే ఆధారాలు.

Source notes and scope

NAAQS numerical table

The notification specifies pollutant values, units, averaging periods and exceptions for ecologically sensitive areas.

- https://scclmines.com/env/docs/naaqs-2009.pdf

AQI parameters and breakpoints

The official CPCB report confirms eight pollutants, six categories, maximum sub-index, data sufficiency and the PM/NO2 breakpoints used here.

- https://airquality.cpcb.gov.in/ccr_docs/FINAL-REPORT_AQI_.pdf

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AQI worked example

Exact sub-indices are approximately 153.49, 148.79 and 62.31, rounding to 153, 149 and 62. The overall index is the maximum, 153, not an average.

Revised NCAP target

The revised target concerns PM10: up to a 40% reduction, or achieving the annual standard of 60 µg/m3, by 2025–26.

- https://www.pib.gov.in/PressReleasePage.aspx?PRID=2078363&lang=2&reg=48

NCAP funding update

The 7 September 2026 release confirms ₹16,423.55 crore provided, ₹11,575.54 crore used, 70.5%, 130 cities and the stated fiscal period.

- https://www.pib.gov.in/PressReleasePage.aspx?PRID=2307658&lang=1&reg=48

GRAP version

The 2026 orders refer to the modified GRAP schedule of 21 November 2025. The lesson uses that version and its four stage thresholds.

- https://caqm.nic.in/

WHO particulate guidelines

Official WHO values are 5/15 for annual/daily PM2.5 and 15/45 for annual/daily PM10, in µg/m3. They are guidance, distinct from Indian legal standards.

- https://iris.who.int/bitstream/handle/10665/345334/9789240034433-eng.pdf

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Additional primary references

A1 United States Environmental Protection Agency

What is Acid Rain?

https://www.epa.gov/acidrain/what-acid-rain

Used for: Atmospheric sulfur and nitrogen acids; carbon-dioxide reference pH about 5.6; acid-deposition pathways and effects.

DAY 18 | TOPIC 177

Evolution of the Indian space programme: from Thumba to today

Science & Technology | Item 20

7. Sources

7.1 Sources

S1

Source: ISRO, "Genesis". https://www.isro.gov.in/genesis.html

Used for: INCOSPAR set up in 1962 under the Department of Atomic Energy; Vikram Sarabhai as founding father; ISRO established in August 1969 in place of INCOSPAR; Space Commission and DOS set up in June 1972 and ISRO brought under DOS in September 1972; SITE (1975-76, ATS-6, about 2,400 villages in six states) and STEP (1977-79, Symphonie); Aryabhata on a Soviet launcher; SLV-3 as the first launch vehicle developed in India, successful in 1980; Bhaskara I and II as pioneering remote sensing missions; APPLE as forerunner of communication satellite systems

S2

Source: ISRO, "Timeline". https://www.isro.gov.in/Timeline.html

Used for: INCOSPAR 1962; first sounding rocket launch on 21 November 1963; TERLS dedicated to the United Nations on 2 February 1968; ISRO formed under the DAE on 15 August 1969; Space Commission and DOS, 1 June 1972; ISRO a Government organisation on 1 April 1975; dates of Aryabhata, Bhaskara-I, the first SLV-3 flight, Rohini, RS-D1, APPLE, Bhaskara-II, INSAT-1A (deactivated 6 September 1982), INSAT-1B, the India-Soviet manned space mission of 2 April 1984, IRS-1A, Chandrayaan-1, MOM, Chandrayaan-2, Chandrayaan-3, Aditya-L1, Gaganyaan TV-D1 (21 October 2023), XPoSat, SpaDeX launch; latest entry GSLV-F17 on 4 September 2026 (read on 18 October 2026)

S3

Source: ISRO, "Aryabhata". https://www.isro.gov.in/aryabhata_1.html

Used for: Launched on 19 April 1975 on a Soviet Kosmos-3M rocket; India's first satellite; designed and fabricated in India; 360 kg; X-ray astronomy, aeronomy and solar physics

S4

Source: ISRO, "Experimental Satellites". https://www.isro.gov.in/ExperimentalSatellites.html

Used for: Aryabhata on C-1 Intercosmos; Rohini Technology Payload (10 August 1979, SLV-3E1, launch unsuccessful); Rohini RS-1 (18 July 1980, SLV-3E2, 35 kg); APPLE (19 June 1981, Ariane-1 V-3, 670 kg, geosynchronous orbit, communication, experimental)

S5

Source: ISRO, "Spacecraft Missions" (list of 136 entries, read on 18 October 2026). https://www.isro.gov.in/SpacecraftMissions.html

Used for: Bhaskara-I (7 June 1979) and Bhaskara-II (20 November 1981) on C-1 Intercosmos; INSAT-1A (10 April 1982, Delta, satellite failure); INSAT-1B (30 August 1983, Shuttle with PAM-D); IRS-1A (17 March 1988, Vostok); launch vehicles of Chandrayaan-1, MOM, Chandrayaan-2, Chandrayaan-3, Aditya-L1, XPoSat and SpaDeX; operational or not operational status of each

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S6

Source: ISRO, "Chandrayaan-1". https://www.isro.gov.in/Chandrayaan_1.html

Used for: Launch on 22 October 2008 from Sriharikota; India's first mission to the Moon; confirmed presence of water molecules; more than 3,400 orbits; communication lost on 29 August 2009

S7

Source: ISRO, "Mars Orbiter Mission Spacecraft". https://www.isro.gov.in/MarsOrbiterMissionSpacecraft.html

Used for: Launch on PSLV-C25 on 5 November 2013; India's first interplanetary mission; fourth space agency to send a spacecraft to Mars orbit; success in its first attempt

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S8

Source: ISRO, "Chandrayaan-3 Mission Details". https://www.isro.gov.in/Chandrayaan3_Details.html

Used for: Launch by LVM3 from Sriharikota; lander module, propulsion module and rover; prime landing site at 69.37 degrees south; mission objectives

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S9

Source: ISRO, "Aditya-L1 Mission Details". https://www.isro.gov.in/Aditya_L1-MissionDetails.html

Used for: Launch on 2 September 2023; about 1.5 million km from the Earth; 7 payloads

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S10

Source: ISRO, "SpaDeX Docking". https://www.isro.gov.in/spadex_docking.html

Used for: SDX-01 and SDX-02 docked in the early hours of 16 January 2025

S11

Source: ISRO, "Achievements of Department of Space (2025)" (29 January 2026). https://www.isro.gov.in/Achievements_Department_of_Space_2025.html

Used for: SpaDeX made India the fourth nation to demonstrate docking in space; Axiom-4 took the second Indian to space and the first Indian, Group Captain Shubhanshu Shukla, to the ISS; "We are in the final phase of the first uncrewed mission"; more than 8,000 ground tests; first Integrated Air Drop Test; civil works at the SSLV Launch Complex, readiness targeted by August 2026 and an orbital launch from it by the end of 2026

S12

Source: ISRO, home page (read on 18 October 2026). https://www.isro.gov.in/

Used for: Gaganyaan-G1 launch campaign headline (it links to S22); no G1 launch date; latest launch on the page GSLV-F17/EOS-05 on 4 September 2026

S13

Source: ISRO, "IN-SPACe". https://www.isro.gov.in/IN-SPACe.html

Used for: Full name; formed following the space sector reforms; single-window, independent, nodal agency functioning as an autonomous agency in the DOS; to promote, enable, authorise and supervise the space activities of non-governmental entities; interface between ISRO and those entities; NSIL listed as a public sector enterprise

S14

Source: Press Information Bureau, "India's Space Odyssey: Building India's Space Future" (backgrounder, 21 June 2026). https://static.pib.gov.in/WriteReadData/specificdocs/documents/2026/jun/doc2026621898801.pdf

Used for: Rakesh Sharma on Soyuz T-11 in 1984; Chandrayaan-1 evidence of water molecules and hydroxyl; MOM entered Mars orbit on 24 September 2014; Chandrayaan-2 orbiter at 100 km and 30 cm detail; Chandrayaan-3 landing on 23 August 2023 and first soft landing near the south pole; Aditya-L1 in a halo orbit around Sun-Earth L1; XPoSat (1 January 2024) and X-ray astronomy; SpaDeX in January 2025; Gaganyaan to send up to three astronauts; Shukla's launch on 25 June 2025 on a SpaceX Dragon and Falcon 9, mission concluded on 15 July 2025; Cabinet approval of BAS-01 by 2028; opening of the sector in 2020 and the Indian Space Policy 2023; "IN-SPACe established in 2022"; NSIL established in 2019; FDI policy of February 2024 and its limits; Kulasekarapattinam as India's second spaceport; one space start-up in 2014 and more than 400 by February 2026

S15

Source: Wikipedia, "Thumba Equatorial Rocket Launching Station" (citing U.R. Rao, *India's Rise as a Space Power*, 2014, p. 11, and P.V. Manoranjan Rao and P. Radhakrishnan, *A Brief History of Rocketry in ISRO*, 2012, pp. 27-28, for the dedication; ISRO's "Sounding Rockets" page and Astronautix for the station). https://en.wikipedia.org/wiki/Thumba_Equatorial_Rocket_Launching_Station

Used for: Two-stage Nike-Apache, built in the United States, on 21 November 1963; station very close to the magnetic equator; dedicated to the UN by Indira Gandhi; renamed VSSC after Sarabhai's death on 30 December 1971; still used for sounding rockets

S16

Source: Wikipedia, "Gaganyaan" (citing the PIB Cabinet release of 18 September 2024 on BAS and the revised Gaganyaan programme). https://en.wikipedia.org/wiki/Gaganyaan

Used for: TV-D1 on 21 October 2023; IADT-01 on 24 August 2025; Cabinet approval of BAS-01 on 18 September 2024; revised programme of eight missions to be completed by December 2028; no uncrewed flight flown

S17

Source: Wikipedia, "Chandrayaan-3" (the National Space Day and Shiv Shakti statements cite news reports in its notes 117 to 119). https://en.wikipedia.org/wiki/Chandrayaan-3

Used for: Lander Vikram and rover Pragyan; landing near the south pole at about 69 degrees south; 23 August declared National Space Day by the Prime Minister; landing point named Statio Shiv Shakti

S18

Source: Wikipedia, "Agnibaan" (citing Indian news reports of 2022 and 2024). https://en.wikipedia.org/wiki/Agnibaan

Used for: AgniKul Cosmos; suborbital flight of Agnibaan SOrTeD on 30 May 2024 from SDSC; Dhanush, the first private launch pad and mission control centre in India at SDSC, inaugurated on 28 November 2022

S19

Source: Wikipedia, "Satish Dhawan Space Centre". https://en.wikipedia.org/wiki/Satish_Dhawan_Space_Centre

Used for: Sriharikota an island in Tirupati district of Andhra Pradesh; operational on 9 October 1971 with an RH-125 sounding rocket; renamed on 5 September 2002

S20

Source: ISRO, "First private orbital launch lifts off from Sriharikota" (July 2026). https://www.isro.gov.in/First_private_orbital_launch_lifts_from_Sriharikota.html

Used for: Skyroot Aerospace's Vikram-I lifted off from SDSC, Sriharikota, on 18 July 2026 and injected two satellites, SCOPE and Grahaa, into low Earth orbit; page title calls it the first private orbital launch, and Skyroot the first private company to launch to orbit from Indian soil; Skyroot's Vikram-S, a suborbital test rocket, launched from Sriharikota on 18 November 2022 (read on 18 October 2026)

S21

Source: ISRO, "Halo-Orbit Insertion of Aditya-L1 Successfully Accomplished". https://www.isro.gov.in/halo-orbit-insertion-adtya-l1.html

Used for: Halo orbit insertion of Aditya-L1 on 6 January 2024

S22

Source: ISRO, "Gaganyaan-G1 Launch campaign commences" (18 December 2024). https://www.isro.gov.in/LVM3_first_uncrewed_flight_Gaganyaan.html

Used for: Launch campaign of the first uncrewed flight begun with assembly of the human-rated LVM3 at SDSC, reported on 18 December 2024; no launch date given

S23

Source: Press Information Bureau, "Historic reforms initiated in the Space sector. Private sector participation in Space activities approved" (24 June 2020). https://pib.gov.in/Pressreleasepage.Aspx?PRID=1633892

Used for: Union Cabinet decision of 24 June 2020; "newly created" IN-SPACe to provide a level playing field for private companies to use Indian space infrastructure

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S24

Source: Prime Minister's Office (pmindia.gov.in), "Cabinet approves amendment in the Foreign Direct Investment (FDI) policy on Space Sector" (21 February 2024). https://www.pmindia.gov.in/?p=16389127

Used for: 100 per cent FDI allowed in the space sector; automatic route up to 74 per cent for satellites manufacturing and operation, satellite data products and ground and user segment; up to 49 per cent for launch vehicles and associated systems and spaceports; up to 100 per cent for components and systems or subsystems

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S25

Source: Prime Minister's Office (pmindia.gov.in), "Bharatiya Antariksh Station (BAS), our own space station for scientific research, to be established with the launch of its first module in 2028" (18 September 2024). https://www.pmindia.gov.in/en/news_updates/bharatiya-antariksh-station-bas-our-own-space-station-for-scientific-research-to-be-established-with-the-launch-of-its-first-module-in-2028/

Used for: Cabinet approval for the development of the first module, BAS-1; launch of the first module in 2028; eight Gaganyaan missions to be completed by December 2028

S26

Source: Wikipedia, "Physical Research Laboratory" (citing PRL's "Brief History" page). https://en.wikipedia.org/wiki/Physical_Research_Laboratory

Used for: PRL founded on 11 November 1947 by Vikram Sarabhai

S27

Source: Wikipedia, "Axiom Mission 4" (citing Space.com reports of 14 and 15 July 2025). https://en.wikipedia.org/wiki/Axiom_Mission_4

Used for: Undocking from the ISS on 14 July 2025; splashdown on 15 July 2025

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7. ఆధారాలు 7.1 ఆధారాలు

ఆధారాల పట్టిక, లింకులు ఇంగ్లిష్ వెర్షన్‌లోని 7.1 విభాగంలో ఉన్నవే (S1 నుంచి S27). రెండు వెర్షన్లకూ అవే ఆధారాలు.

Source notes and scope

ISRO institutional and early mission history

ISRO Genesis and Timeline support the main sequence and SITE/STEP. Genesis explicitly states September 1972 for transfer under DOS.

- https://www.isro.gov.in/genesis.html
- https://www.isro.gov.in/Timeline.html

First private orbital launch

ISRO confirms Skyroot's Vikram-I launch of SCOPE and Grahaa on 18 July 2026. This is distinct from Vikram-S's suborbital flight.

- https://www.isro.gov.in/First_private_orbital_launch_lifts_from_Sriharikota.html

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Gaganyaan-G1 status

The ISRO release of 16 October 2026 describes the uncrewed Gaganyaan-G1 mission as upcoming, with a 2026 target. TV-D1 is an earlier test flight and is not G1.

- https://www.isro.gov.in/ISRO_EN/Crew_Module_Service_Module_Separation_Tests.html

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Ax-4 return dates

NASA and Axiom confirm undocking on 14 July and splashdown on 15 July 2025.

- https://www.nasa.gov/blogs/spacestation/2025/07/15/ax-4-returns-home-expedition-73-studies-space-effects-on-heart-nervous-system/
- https://www.axiomspace.com/mission-blog/ax4-splashes-down

Space FDI and startups

PIB confirms the 74%, 49% and 100% automatic-route categories and more than 400 registered startups as of February 2026.

- https://www.pib.gov.in/PressReleasePage.aspx?PRID=2007876&lang=2&reg=48
- https://www.pib.gov.in/PressReleaseIframePage.aspx?PRID=2276117&lang=2&reg=48

Kulasekarapattinam status

The cited sources do not establish a completed orbital launch from Kulasekarapattinam. Readiness dates and launch targets are plans, not evidence that a launch occurred.

- https://www.isro.gov.in/ISRO_EN/LaunchMissions.html
- https://sansad.in/getFile/annex/270/AU2374_ezNEov.pdf?source=pqars

DAY 18 | TOPIC 178

Blood relations: pointing and introducing problems

General Mental Ability: Reasoning & Psychological | Item 3

7. Sources

7.1 Sources

S1

Source: Wikipedia, "Family", the part on kinship terminology (most definitions there carry no inline citation; they are ordinary dictionary meanings). https://en.wikipedia.org/wiki/Family

Used for: Meanings of father, mother, son, daughter, brother, sister, husband, wife, grandfather, grandmother, grandson, granddaughter, sibling, uncle and aunt (a parent's siblings), nephew and niece (a sibling's child); kinship terms distinguish sexes and generations; relatives on the mother's and the father's side

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S2

Source: "Blood Relations - Theory & Concepts", study material on the SATHEE bank-exam pages of ibps.iitk.ac.in (the page names no author or publisher). https://ibps.iitk.ac.in/sathee-bank-exam/bank-exams/ibps-po/study-materials/memory-based-questions/blood-relations/theory

Used for: The pointing ("Pointing to a photograph, A said") and conversation forms; coded relations with symbols; "only son of X" means X has one son and may have daughters; the guidebook reading "only son of my grandfather" as "my father"; "brother's father" as one's own father; generation levels 0, +1, +2, -1 and -2; the common mistakes of assuming a gender, ignoring "only" and giving the reverse relation

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S3

Source: Hitbullseye, "Blood Relations: Types explained with examples". https://www.hitbullseye.com/Reasoning/Blood-Relation-Questions.php?amp=1

Used for: Dialogue (pointing) and coded-relation types of question; a table giving "father's son or mother's son" as "brother"; "from a person's name, we cannot judge the gender of that person"

S4

Source: Testbook, "సాధారణ రక్త సంబంధ సమస్యలు MCQ Quiz in తెలుగు" (a Telugu-language practice page). https://testbook.com/objective-questions/te/mcq-on-general-blood-relation-problems--5eea6a0e39140f30f369e4ce

Used for: How Telugu versions word these questions: "ఒక అబ్బాయిని చూపిస్తూ" "ఫోటోలోని వ్యక్తిని చూపిస్తూ" "ఒక వ్యక్తిని పరిచయం చేస్తూ" "ఏకైక కుమారుడు", "ఏకైక కొడుకు", "ఇలా అన్నాడు", "ఇలా చెప్పింది", "నా తండ్రి", "నా తల్లి", "ఏమవుతాడు"

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7. ఆధారాలు 7.1 ఆధారాలు

ఆధారాల పట్టిక, లింకులు ఇంగ్లిష్ వెర్షన్‌లోని 7.1 విభాగంలో ఉన్నవే (S1 నుంచి S4). రెండు వెర్షన్లకూ అవే ఆధారాలు.

Source notes and scope

Blood-relation derivations

The drills use the stated fictional family-model assumptions. Generation changes follow the relationship links, and an unstated gender or missing relationship must not be inferred. D6 depends on its stated premise.

Generation-count convention

Generation-count clarification: the 0 beside a brother/sister link means no change of generation, not generation level 0. In D7, A and B are at +1 relative to D. In D8, L and M are at +1 and K at +2 relative to N. The sums are +1 + 0 = +1 and +1 + 0 + 1 = +2.

తరాల లెక్కలో స్పష్టీకరణ: సోదరుడు/సోదరి సంబంధం వద్ద 0 అంటే తర స్థాయిలో మార్పు లేదని అర్థం; ఆ వ్యక్తి స్థాయి 0 అని కాదు. D7లో Dతో పోలిస్తే A, B ఇద్దరూ +1 స్థాయిలో ఉంటారు. D8లో Nతో పోలిస్తే L, M +1 స్థాయిలో, K +2 స్థాయిలో ఉంటారు. మొత్తాలు: +1 + 0 = +1; +1 + 0 + 1 = +2.

DAY 18 | TOPIC 179

Direct and inverse variation

General Mental Ability: Quantitative & Data | Item 7

7. Sources

7.1 Sources

S1

Source: NCERT, *Mathematics*, Class VIII (the textbook used before *Ganita Prakash*), Chapter 11 "Direct and Inverse Proportions", Sections 11.1 to 11.3, Examples 1 to 5 and 7 to 9, Exercises 11.1 and 11.2 and "What have we discussed?", read on the SATHEE portal of IIT Kanpur. https://sathee.iitk.ac.in/ncert-books/class-08/mathematics/chapter-11-direct-and-inverse-proportions

Used for: Direct proportion as x/y = k (x = ky), with x1/y1 = x2/y2; inverse proportion as xy = k, with x1y1 = x2y2 and x1 : x2 = y2 : y1; the two summary statements; the caution that quantities rising together need not be in direct proportion (height and weight); sugar at Rs 36 a kg; 4 litres for 60 km and 12 litres for 180 km; cloth (5 m for Rs 210, 13 m for Rs 546); the pole and tree shadows (21 m); 12 sheets weighing 40 g and 750 sheets in 2 1/2 kg; the train at 75 km/h (25 km in 20 minutes); the map scale 1 : 30,000,000 (4 cm stand for 1,200 km); Rs 6,000 for books at Rs 40, Rs 50 and Rs 100; 6 pipes in 80 minutes and 5 pipes in 96 minutes; hostel food for 100 students for 20 days and 125 students for 16 days; 15 workers in 48 hours and 24 workers in 30 hours; faster speed, less time for the same journey

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S2

Source: Wikipedia, "Proportionality (mathematics)" (citing Weisstein, MathWorld, "Directly Proportional" and "Inversely Proportional"; Burrell, *Merriam-Webster's Guide to Everyday Math*, 1998, pp. 85 to 101). https://en.wikipedia.org/wiki/Proportionality_(mathematics)

Used for: The constant of proportionality; direct proportion as a line with y-intercept 0 and slope k (a straight line through the origin); inverse proportion as a constant product, its graph a rectangular hyperbola that never crosses either axis; for a fixed distance, time is inversely proportional to speed; at a constant speed, distance is directly proportional to time; map distances directly proportional to real distances

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S3

Source: Wikipedia, "Gear train" (citing Shigley and Mischke, *Mechanical Engineering Design*, 5th edition, McGraw-Hill, 1989, Chapter 13, pp. 533 and 552). https://en.wikipedia.org/wiki/Gear_train

Used for: For two meshing gears, the speed ratio is inversely proportional to the number of teeth; the gear with more teeth turns more slowly

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S4

Source: SATHEE portal (IIT Kanpur), bank examinations study material, "Time & Work - Theory & Concepts". https://ibps.iitk.ac.in/sathee-bank-exam/bank-exams/ibps-po/study-materials/memory-based-questions/time-and-work/theory

Used for: The relation M1 × D1 × H1 × E1 / W1 = M2 × D2 × H2 × E2 / W2 (men, days, hours, efficiency, work); the method for workers who join midway (find the work done before they join, then the time for the rest)

S5

Source: Teachoo, "Class 8 Maths" chapter index (its "Old NCERT Class 8 Maths Chapters" list). https://teachoo.com/subjects/cbse-maths/class-8

Used for: Direct and Inverse Proportions numbered Chapter 13 in the older NCERT Class VIII book (Chapter 11 in the copy read for S1)

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7. ఆధారాలు 7.1 ఆధారాలు

ఆధారాల పట్టిక, లింకులు ఇంగ్లిష్ వెర్షన్‌లోని 7.1 విభాగంలో ఉన్నవే (S1 నుంచి S5). రెండు వెర్షన్లకూ అవే ఆధారాలు.

Source notes and scope

Variation arithmetic and graphs

Variation examples depend on the stated positive domain, units, efficiency and comparable-work assumptions. For direct variation, a graph through the origin describes the relation only where the domain allows it.

DAY 18 | TOPIC 180

Current affairs: Nipah virus

Current Affairs | CA-ST

7. Sources

7.1 Sources

S1

Source: World Health Organization, fact sheet "Nipah virus", 29 January 2026. https://www.who.int/news-room/fact-sheets/detail/nipah-virus

Used for: Zoonotic nature; natural host (Pteropodidae fruit bats, no disease in bats); routes (raw date palm juice, bats, pigs, horses, person to person, health care settings); Malaysia 1998 among pig farmers; Singapore 1999; Bangladesh from 2001; India from 2001; Philippines 2014; incubation 3 to 14 days, rarely 45; symptoms; 1 in 5 survivors with long-term neurological conditions; case fatality rate 40 to 75 per cent; RT-PCR and ELISA; maximum containment; supportive care; no approved drugs or vaccines, candidates in development; prevention advice; R&D Blueprint priority disease

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S2

Source: WHO, Disease Outbreak News "Nipah virus infection - India" (DON593), 30 January 2026, revised 31 January 2026. https://www.who.int/emergencies/disease-outbreak-news/item/2026-DON593

Used for: West Bengal event: Barasat, North 24 Parganas; two nurses, aged 20 to 30, same private hospital; onset late December 2025; NIV Pune confirmation on 13 January 2026 by RT-PCR and ELISA; WHO notified 26 January 2026; status on 21 January; mobile BSL-3 laboratory; NCDC statement of 27 January; Siliguri 2001 and Nadia 2007, third outbreak; 66 cases in 2001; the regional seasonal discussion of December to May, not a universal West Bengal-only rule; risk assessment; no travel or trade restrictions; species name *Henipavirus nipahense*; *Pteropus* hosts; symptoms and coma in 24 to 48 hours

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S3

Source: WHO, Disease Outbreak News "Nipah virus disease - India" (DON609), 25 June 2026. https://www.who.int/emergencies/disease-outbreak-news/item/2026-DON609

Used for: Kozhikode case of June 2026 (onset 30 May, admitted 10 June, confirmed 11 June, NIV Pune RT-PCR, 104 contacts as on 18 June, no secondary case); Kerala outbreak years 2018, 2019, 2021, 2023, 2025, 2026 as given by the NCDC; 18 cases in 2018; about a dozen cases in the past five years, all in Kerala; April to September alert period; no licensed medicines or vaccines; priority pathogen

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S4

Source: WHO South-East Asia Region, "Nipah virus infection" outbreak page. https://who.int/southeastasia/outbreaks-and-emergencies/nipah-virus

Used for: List of WHO notices on Nipah in 2025 and 2026, and that no later notice on India was posted after 25 June 2026

S5

Source: WHO South-East Asia Region, Epidemiological Bulletin, 2nd edition 2026, 28 January 2026. https://cdn.who.int/media/docs/default-source/searo/whe/wherepib/2026_02_searo_epi_bulletin.pdf

Used for: The Ministry's statement on the two cases, 196 contacts, all negative; no additional cases

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S6

Source: National Centre for Disease Control, Directorate General of Health Services, "CD Alert: Nipah Virus Disease", January 2026. https://ncdc.mohfw.gov.in/wp-content/uploads/2026/01/CD-Alert-NIPAH-Virus.pdf

Used for: Family Paramyxoviridae, genus Henipavirus; RNA genome; clades NiV-MY and NiV-BD; genus *Pteropus*; name from Sungai Nipah; 276 cases, over 100 deaths, September 1998 to May 1999; Singapore 11 cases, 1 death; Bangladesh season and 46 per cent; India table 2001 to 2025; incubation 4 to 14 days in 90 per cent; 20 to 30 per cent neurological deficits; relapse up to four years; ELISA at 10 to 14 days; BSL-4 for post-mortem tissue; ribavirin; m102.4 phase 1 and compassionate use; ChAdOx1 NipahB phase II trial in Bangladesh in 2025; prevention (toddy, fallen fruit, wells); culling; 21-day follow-up; response measures; One Health teams

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S7

Source: All India Radio News (Prasar Bharati), "NCDC confirms only two Nipah virus cases reported in West Bengal since December", 28 January 2026. https://newsonair.gov.in/ncdc-confirms-only-two-nipah-virus-cases-reported-in-west-bengal-since-december/

Used for: Statement of the NCDC and the Ministry of Health and Family Welfare: two confirmed cases; 196 contacts identified, traced, monitored and tested; all negative

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S8

Source: WHO, "Prioritizing diseases for research and development in emergency contexts" (R&D Blueprint). https://www.who.int/activities/prioritizing-diseases-for-research-and-development-in-emergency-contexts

Used for: The list of priority diseases, including "Nipah and henipaviral diseases", Ebola, Lassa fever, Zika and "Disease X"

S9

Source: US Centers for Disease Control and Prevention, "About Nipah Virus", last reviewed 13 February 2026. https://www.cdc.gov/nipah-virus/about/index.html

Used for: Check: *Pteropus* fruit bats; 4 to 14 days; no licensed treatments

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S10

Source: CDC, "Nipah virus: Facts for Clinicians", last reviewed 13 February 2026. https://www.cdc.gov/nipah-virus/hcp/clinical-overview/index.html

Used for: Family Paramyxoviridae, genus Henipavirus; incubation 4 to 14 days; RT-PCR and ELISA; supportive care; remdesivir in non-human primates; ribavirin in the 1999 Malaysian outbreak

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S11

Source: ICMR-National Institute of Virology, Pune, "Salient features". https://niv.icmr.org.in/form/root/features/

Used for: The institute's mobile BSL-3 laboratory

S12

Source: WHO, fact sheet "Japanese encephalitis", 6 August 2024. https://www.who.int/news-room/fact-sheets/detail/japanese-encephalitis

Used for: JE virus a flavivirus; vector *Culex tritaeniorhynchus* and other *Culex* species; cycle among mosquitoes, pigs and water birds; vaccines available

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S13

Source: National Centre for Disease Control, "CD Alert: Kyasanur Forest Disease, a public health concern" (after February 2018). https://ncdc.mohfw.gov.in/uploads/glimpse_pdfs/1770280050_Kyasanur-Forest-Disease-A-public-health-concern.pdf

Used for: KFD virus in the family Flaviviridae; first found in 1957 in the Kyasanur forest area, Shimoga district, Karnataka; ticks of the genus *Haemaphysalis*, major vector *H. spinigera*; rodents and small mammals; monkeys; "monkey fever"; man an incidental dead-end host

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S14

Source: CDC, "About Kyasanur Forest Disease", 29 December 2025. https://www.cdc.gov/kyasanur/about/index.html

Used for: Check: hard ticks spread the KFD virus to people, monkeys and rodents

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S15

Source: WHO, Disease Outbreak News "Acute encephalitis syndrome due to Chandipura virus - India" (DON529), 23 August 2024. https://www.who.int/emergencies/disease-outbreak-news/item/2024-DON529

Used for: Chandipura virus in the family Rhabdoviridae; vectors such as sandflies, mosquitoes and ticks; *Phlebotomus papatasi* reported as the vector in Gujarat; children under 15; acute encephalitis syndrome

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S16

Source: The institute's current affairs file: Insights "Current Affairs 30", January 2026, "Nipah Virus", page 95

Used for: Selection of the item only. The facts in the notes are taken from the official sources listed in this table

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S17

Source: WHO, Disease Outbreak News "Nipah virus infection - India" (DON577), 6 August 2025. https://www.who.int/emergencies/disease-outbreak-news/item/2025-DON577

Used for: Four confirmed cases and two deaths in Kerala in 2025 (Malappuram and Palakkad); two fatal cases in Kerala in 2024

S18

Source: Press Information Bureau, Ministry of Health and Family Welfare, "A Nipah virus patient in Mallapuram district of Kerala, confirmed by NIV, Pune succumbs to the disease", 21 July 2024. https://www.pib.gov.in/PressReleasePage.aspx?PRID=2034771

Used for: The 2024 case: a 14-year-old boy from Malappuram, confirmed by NIV Pune, who died

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S19

Source: University of Oxford, news item on the world's first Phase II clinical trial of a Nipah virus vaccine candidate, 15 December 2025. https://www.ox.ac.uk/news/2025-12-15-worlds-first-phase-ii-nipah-virus-vaccine-trial-launch

Used for: ChAdOx1 NipahB phase II trial in Bangladesh launched by the University of Oxford in December 2025

S20

Source: WHO, "Pathogens prioritization: a scientific framework for epidemic and pandemic research preparedness", 30 July 2024. https://www.who.int/publications/m/item/pathogens-prioritization-a-scientific-framework-for-epidemic-and-pandemic-research-preparedness

Used for: The 2024 update of the R&D Blueprint prioritisation: pathogens reviewed by family (28 virus families and one core group of bacteria)

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7. ఆధారాలు 7.1 ఆధారాలు

ఆధారాల పట్టిక, లింకులు ఇంగ్లిష్ వెర్షన్‌లోని 7.1 విభాగంలో ఉన్నవే (S1 నుంచి S20). రెండు వెర్షన్లకూ అవే ఆధారాలు.

Source notes and scope

Nipah biology and clinical statements

WHO, CDC and NCDC support the main teaching claims. Separate NCDC's 21-day contact follow-up from rare 45-day incubation. Lack of approval is specifically for Nipah.

- https://www.who.int/news-room/fact-sheets/detail/nipah-virus
- https://ncdc.mohfw.gov.in/wp-content/uploads/2026/01/CD-Alert-NIPAH-Virus.pdf
- https://www.cdc.gov/nipah-virus/hcp/clinical-overview/index.html

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West Bengal January 2026

Two nurses were affected. NIV confirmation was on 13 January and WHO notification on 26 January; the 27 January checkpoint recorded 196 contacts testing negative. Risk assessments and the erratum belong to the dated report.

- https://www.who.int/emergencies/disease-outbreak-news/item/2026-DON593
- https://www.pib.gov.in/PressReleasePage.aspx?PRID=2219219&reg=3&lang=1

Kerala June 2026

Kozhikode confirmation was on 11 June 2026. The 18 June checkpoint recorded 104 contacts and no secondary cases; these are dated observations.

- https://www.who.int/emergencies/disease-outbreak-news/item/2026-DON609

Nipah vaccine Phase II

Oxford's 15 December 2025 announcement confirms that the Bangladesh trial began earlier that month. Trial status is not licensure.

- https://www.ox.ac.uk/news/2025-12-15-worlds-first-phase-ii-nipah-virus-vaccine-trial-launch

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JE, KFD and Chandipura comparison

Official sources support all four matching pairs. WHO's generic mention of ticks does not establish the specific Haemaphysalis match for Chandipura.

- https://www.who.int/news-room/fact-sheets/detail/japanese-encephalitis
- https://ncdc.mohfw.gov.in/uploads/glimpse_pdfs/1770280050_Kyasanur-Forest-Disease-A-public-health-concern.pdf
- https://www.who.int/emergencies/disease-outbreak-news/item/2024-DON529

Magazine selection provenance

Supplied selection citation: Insights “Current Affairs 30”, January 2026, “Nipah Virus”, page 95. Clinical and outbreak statements use the official health references listed above.
