



INWISE JNANAMEDHA

EMPOWERING MINDS, ENRICHING FUTURES

INWISE JNANAMEDHA KAS PRELIMS

PYQ Themes Analysis



RELEVANT PYQs
FROM PAST YEARS



EXAM FOCUSED
PREPARATION



ACCURATE &
VERIFIED CONTENT



YOUR SUCCESS
OUR MISSION

KPSC KAS PRELIMS

PREVIOUS YEAR QUESTION ANALYSIS

Subject-wise Weightage, Themes & Trends

Papers Analysed: 2014 | 2015 | 2017 | 2024 (August) | 2024 (December)

Paper 1 (GS-1) — Comprehensive Theme Analysis

SECTION 1: OVERALL SUBJECT WEIGHTAGE

The table below extends the KPSC KAS Prelims Themes document by adding 2015 and 2024 data. Numbers represent estimated question count from Paper 1 (GS-1) per subject.

Paper 1 — Subject-wise Question Count Across Years

Subject	2010	2011	2014	2015*	2017	2020	2024 Aug†	2024 Dec
HISTORY	26	16	19	20	18	18	19†	16
GEOGRAPHY	11	14	21	14	17	19	21†	12
POLITY	12	13	13	18	18	14	13†	20
ECONOMY	19	28	35	22	24	34	35†	18
SCIENCE & TECH	25	28	31	14	19	14	31†	18
ENVIRONMENT	00	10	13	06	06	10	13†	06
INT. RELATIONS	—	—	—	—	—	—	—	10
CURRENT AFFAIRS	—	—	—	06	02	04	—	00

- * 2015 paper contains 2017-era current affairs references; likely held in 2017
- † 2024 August is a re-examination paper with content identical to KAS Prelims 2014
- — Subject not separately coded in that year's paper
- Int. Relations emerged as a distinct category only in 2024 December
- Number of questions may vary due to cancelation and overlapping of content in other topics and paper 2

SECTION 2: PAPER 1 — DETAILED THEME ANALYSIS

2.1 HISTORY

History consistently contributes 16–26 questions across all KAS Paper 1 exams. It is divided into four sub-categories: Ancient, Medieval, Modern, and Karnataka History.

A. Ancient History

KAS 2010	<ul style="list-style-type: none"> • Chola Literature — Gadyakarnamrita • Who analysed Chola Inscriptions • Rigveda — Hymn • Neolithic and Mesolithic Paintings • Mahajanapadas — Capitals • Mauryan Empire — Bindusara, Greeks
KAS 2011	<ul style="list-style-type: none"> • Indus Valley — Northernmost city • Ashokan Inscriptions • Mauryan Empire — Ashoka's other names • Mahajanapadas • Facts known to Aryabhata
KAS 2014	<ul style="list-style-type: none"> • Gupta Age — Speciality/Achievements • Sangam Literature • Buddhism — Hinayana vs Mahayana • Indus Valley — Special features of Cities
KAS 2015	• Nil (Ancient History absent — all History was Medieval/Modern/Karnataka)
KAS 2017	• Nil (Ancient History absent in 2017 Paper 1)
KAS 2020	<ul style="list-style-type: none"> • Nayanars / Aliyars / Sangam Literature • Punch Marked Coins & Foreign Coins (Coinage Q) • Idols — Chaturvimashti Murthy (Famous Idols) • Chola Bronzes • Guptas — Samudra Gupta
KAS 2024 Dec	<ul style="list-style-type: none"> • Ajanta Paintings — Buddhist sect affiliation • Satavahana — Town Administration (Nagara Sabha) • Chola — Landlord associations (Ur/Sabha) • Buddhist Council — Mahayana-Hinayana split (3rd/4th Council) • Ashoka's Inscriptions — types and languages

B. Medieval Indian History

KAS 2010	<ul style="list-style-type: none"> • Delhi Sultanate — Razia Sultana • Mughals — Foreign Travellers visits
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	<ul style="list-style-type: none"> • Historian about Ghoris Conquest • Sultanate Administration — Slavery system
KAS 2011	<ul style="list-style-type: none"> • Mughals — Revenue System (Todarmal)
KAS 2014	<ul style="list-style-type: none"> • Delhi Sultans — Architecture • Delhi Sultans — Literature • Important Battles — Humayun • Struggle for Supremacy in North during 9th-10th Century
KAS 2015	<ul style="list-style-type: none"> • Mughal — Nadir Shah attack (same as 2017 Q47) • Mughal literature — Humayunama, author • Bhakti Saints — statements-based • Amir Khusro — contributions • Delhi Sultanate — Sijda practice (Balban's divine theory)
KAS 2017	<ul style="list-style-type: none"> • Mughal — Nadir Shah attack on Delhi • Sufis — Literature and compositions • Bhakti Movement — Kabir, Ramdev, Namdev • Delhi Sultans — Famous Ruler identification
KAS 2020	<ul style="list-style-type: none"> • Ports and Trade • British East India Company — formation & early trading • Religious spread by European colonies
KAS 2024 Dec	<ul style="list-style-type: none"> • Mughal — Mina Bazar (Humayun's institution; Akbar's Kuhs Ruz) • Shivaji — Dadaji Kondadev, Javli conquest, family

C. Modern Indian History

[i] Morley-Minto Reforms and EIC-related questions appear in 2015, 2017, and 2024 Dec — extremely high-frequency topic.

KAS 2010	<ul style="list-style-type: none"> • Famous Personalities and their Books • Congress Sessions — Lahore Session • Chronological order of events • Indian Unification — Sardar Patel's associates • Nehru — last case he fought as lawyer • Vernacular Press Act 1878 • Drain of Wealth Theory — Dadabhai Naoroji • Home Rule Movement • Gandhi's Title — Kaiser-e-Hind • Dandi March — number of persons from Ashram
KAS 2011	<ul style="list-style-type: none"> • Title — Grand Old Man of India (Dadabhai Naoroji) • Gandhi's Ashram in South Africa — Tolstoy Farm • Revolt of 1857 • Gandhi's Guru • Jinnah's 14 Points • Rowlatt Act • Congress Sessions — Belgaum Session (1924 — Gandhi president) • Indian National Movement — Moderate Phase

	<ul style="list-style-type: none"> • Kamala Devi Chattopadhyaya
KAS 2014	<ul style="list-style-type: none"> • Mappila Rebellion • Land Revenue System — Ryotwari • Congress Sessions — Lahore Session (1929 — Purna Swaraj) • Charter Act of 1813 • Transfer of Power from England — Plan of Balkan
KAS 2015	<ul style="list-style-type: none"> • Morley-Minto Reforms (ICA 1909) — provisions • Chronological order (August Offer, Simla Conf., Cripps Mission, Cabinet Mission) • K.E. Mammen — Gandhian freedom fighter, State • Sanskrit language quote (Sir William Jones) — historian identification • East India Company — informal name (John Company) • Ahmedabad Mill Strike 1918 — leader (George Fernandes? — likely Mahatma Gandhi connection) • Hartog Committee — Education • Cripps Mission — Gandhi's 'post-dated cheque' quote
KAS 2017	<ul style="list-style-type: none"> • Morley-Minto Reforms — provisions • Chronology of events (Indian National Movement) • Mughal literature — author, famous book • Historian's comment on Sanskrit • East India Company — Synonym/informal name • Ahmedabad Mill Strike 1918 — leader • Cripps Mission — Gandhi's quote
KAS 2020	<ul style="list-style-type: none"> • Ports associated with colonial trade • British East India Company — charter, founding • Religious spread by colonies • Treaty of Allahabad 1765 (EIC)
KAS 2024 Dec	<ul style="list-style-type: none"> • Bhikaji Cama — statements ('Mother of Indian Revolution', 1907 Stuttgart Congress) • Morley-Minto Reforms 1909 — four detailed statements • Lahore Resolution — incorrect statement identification • Indian Statutory Commission (Simon Commission) 1927 — provisions • Rajaram Mohan Roy — statements (Brahmo Samaj, social reform) • Preetilata Waddedar — woman revolutionary who shot magistrate Stevens

D. Karnataka History

[i] Karnataka History is UNIQUE to KAS — UPSC does not test this. This is the single biggest differentiator. Target 6–8 correct answers here.

KAS 2010	<ul style="list-style-type: none"> • Talagunda Inscription — Kadamba dynasty • Gomateshwara Statue — Western Ganga dynasty • Karnataka Unification — CM of Coorg till 1956 • Arrange Karnataka Dynasties chronologically
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	<ul style="list-style-type: none"> • Hoysala power centre in Tamil Nadu (Dorasamudra? — power in Gangavadi) • Sangama Dynasty — Vijayanagara (founders)
KAS 2011	<ul style="list-style-type: none"> • Karnataka Vaibhava — Karnataka Unification (1956)
KAS 2014	<ul style="list-style-type: none"> • Satavahanas Administration (in Karnataka region) • Adil Shahis of Bijapur — Architect/Monuments • Vijayanagara — Administration • Mysore State status during British — Hierarchy • Salt Satyagraha — Karnataka • No Tax Movement (Civil Disobedience in Karnataka)
KAS 2015	<ul style="list-style-type: none"> • Battle of Talikota 1565 • Sangolli Rayanna — Commander of Rani Chennamma • Travellers to Vijayanagara Empire (Abdur Razzak, Nicolo Conti, Fernao Nuniz, Barbosa) • Karnataka participants in Gandhi's Dandi March • First Christian Missionary school in Mysore • Hoysala Temples (Belur, Halebidu etc.) • Flag Satyagraha at Shivapura — KPCC president • Talakadugonda — king who assumed this title (Hoysala king)
KAS 2017	<ul style="list-style-type: none"> • Battle of Talikota 1565 — king of Vijayanagara (Sadashiva Raya / Rama Raya) • Rani Chennamma of Kittur — Commander (Sangolli Rayanna) • Travellers to Vijayanagara Empire — matching with rulers • Karnataka in Dandi March (Salt Satyagraha) • Hoysala Temples — identification • Hoysala — Titles of Kings (Talakadugonda)
KAS 2020	<ul style="list-style-type: none"> • Famous Agraharas of Karnataka • Indus Civilization — Historian linked to Karnataka gold mines • Rashtrakutas — Historian who established Kannada origin • Nayakas — Chitradurga, Madakari Nayaka • Vijayanagara-Bahamani — Place of wars (Raichur Doab) • Akhila Karnataka Satyagraha Dina
KAS 2024 Dec	<ul style="list-style-type: none"> • National Movement in Mysore — book 'Political Economy of Indirect Rule' (period-wise divisions) • Nagar Revolt — cause (faulty land-renting system) • Bharat Ratna Award — statements (historical context)

2.2 GEOGRAPHY

Geography contributes 11–21 questions per year. Three sub-categories: World Geography (5–10 Qs), Indian Geography (1–9 Qs), Karnataka Geography (0–7 Qs).

A. World Geography (Physical, Human & Economic)

i Climate types (Savanna, Mediterranean, Tropical Rain Forest), Landforms, Soils, and Mineral Resources are the highest-frequency World Geography topics.

KAS 2010	<ul style="list-style-type: none"> • Planetary Winds — Doldrums • Shifting Cultivation — different names • Types of Volcanoes (active, dormant, extinct) • Types of Rocks (factual) • Ocean Currents (cold & warm) • Volcanic Mountains • Structure of Atmosphere • Atmospheric phenomena (insolation, greenhouse, UV rays) • Conflicts in oceans (piracy — Somalia)
KAS 2011	<ul style="list-style-type: none"> • Ocean Currents (map-based) • Types of Rocks (Igneous, Metamorphic, Sedimentary) • Erosional/Depositional landforms (inselberg, chasms, comb bridge, alluvial terraces) • Types of Soils (Red, Laterite, Chernozem) • Climate types — Africa continent (map-based) • World Lakes (pair-based) • Atmospheric phenomena — Aurora Borealis • Important Tribes of the world • Climatic zones (tropical, temperate, polar) & biodiversity
KAS 2014	<ul style="list-style-type: none"> • Landforms by Endogenic & Exogenic forces • Savannah climate features • Solar & Planetary system (Mars) • World Oceans — facts • World Lakes — facts • Mediterranean climate features • Coal Deposit locations & countries • Tropical cyclones (current affairs) • Railways — Transcontinental • Disputed regions — Islands (North & South Korea)
KAS 2015	<ul style="list-style-type: none"> • Shifting Cultivation — local names (Huma/Ladang, Milpa, Ray, Roca) • Coal Deposit locations — Sichuan, Pennsylvania, Kizel, Ipswich, Talcher • Savanna Climate — features • Types of Mountains — Fold, Block, Volcanic, Residual (matching) • Rhine Waterway — world's most used inland waterway
KAS 2017	<ul style="list-style-type: none"> • Shifting Cultivation — local names in different countries • Mineral Resources — Coal Deposit locations & countries • Types of Climates — Savannah type features

	<ul style="list-style-type: none"> • Types of Mountains — Fold, Block, Volcanic, Residual • Modes of Transportation — Rhine Waterway (Inland)
KAS 2020	<ul style="list-style-type: none"> • Erosional & Depositional Landforms — Kame Terraces • Erosional & Depositional Landforms — Naleds (frozen ground water) • Migration Transition Theory (Zelinsky) • Rare Earth Minerals • Population Geography — Population structure and pyramids • Types of Coastlines — Compound Coast • Types of Soils — Interzonal Soils • Types of forests/climates — Tropical Rain Forests
KAS 2024 Dec	<ul style="list-style-type: none"> • Atmosphere — statements about layers/composition • Karst Topography — features (sinkholes, caves, dolines) • Wind Deposition Landforms — types (Barchan, Seif dune) • Ocean Currents — statements • Polar Vortex — features • Volcanic Landforms — matching descriptions (caldera, lava plateau)

B. Indian Geography

KAS 2010	<ul style="list-style-type: none"> • Himalayan Peaks — Nanda Devi • Landlocked States of India
KAS 2011	<ul style="list-style-type: none"> • River System — comparison Himalayan & Peninsular • Major Ports of India — leading product exported port-wise • Delta formed by Gangetic River (arcuate) • Himalayas & associated river system (concept-based)
KAS 2014	<ul style="list-style-type: none"> • Agro-Climatic Zones — Gujarat region • Indian Agriculture Exports — cotton top destinations • Distribution of Rainfall — highest and lowest • Transnational Roadways — India-Pakistan
KAS 2015	<ul style="list-style-type: none"> • Census Town 2011 — criteria (population ≥ 5000, male workers $\geq 50\%$ non-agri, density $\geq 400/\text{sq km}$) • Waterfall — River pairs (Budha Ghag, Dhuandhar, Dudhsagar, Gokak) • Tribes in Tamil Nadu — identification • Mountain Passes & States (matching) • Leading producer of Soybean State • Majuli Island — world's largest river island (Brahmaputra) • Indus Water Treaty — statements
KAS 2017	<ul style="list-style-type: none"> • Mountain Ranges, Peaks & associated States • Different Tribes & associated States • Mountain Passes & associated States • Leading producers of agriculture crops (Soybean — Madhya Pradesh) • Mineral resources — highest producing States • Active Volcano in India (Barren Island — A&N Islands) • Indian Railways — zones

	<ul style="list-style-type: none"> • Indus Water Treaty 1960 (CA topic)
KAS 2020	<ul style="list-style-type: none"> • Crops — Kharif, Rabi, Zaid seasons (Watermelon = Zaid) • Waterfalls — associated river • Mineral Resources — Types of Coal • National Ganga Council • Railway Zones & Headquarters • Rivers & their Tributaries • Industrial Geography — Major/minor industrial regions • Tourist/Trekking spots — associated rivers (Chadar Trek — Zaskar) • Geological rock structures — Rock bed of Krishna-Godavari delta (Ravva structure)
KAS 2024 Dec	<ul style="list-style-type: none"> • States traversal — Karnataka to Mizoram by land (minimum states to cross)

C. Karnataka Geography

[i] Karnataka Geography questions grew from 0 in 2010 to 7 in 2014. Key perennial topics: Wildlife Sanctuaries– Animal pairs, Waterfall–River pairs, Peaks & altitudes, Agro-climatic zones.

KAS 2010	<ul style="list-style-type: none"> • NA
KAS 2011	<ul style="list-style-type: none"> • Agro-Climatic Zones of Karnataka
KAS 2014	<ul style="list-style-type: none"> • Erosional Landforms — Coastal Karnataka • Transportation — Railways in Karnataka • Distribution of Rainfall — highest & lowest in Karnataka • Interstate Water Disputes — Kalasa Banduri • Multi-Purpose Hydropower Projects — Dams/Reservoirs • Districts — area-wise biggest and smallest • Animal Husbandry — indigenous cattle breeds
KAS 2015	<ul style="list-style-type: none"> • Peaks of Karnataka in descending order of height • River catchment areas of Karnataka (descending order)
KAS 2017	<ul style="list-style-type: none"> • Wildlife Sanctuaries — animals associated with them • Catchment areas of rivers in Karnataka • Waterfalls on rivers in Karnataka • Different Peaks of Karnataka & altitude (height)
KAS 2020	<ul style="list-style-type: none"> • Agro-Climatic Zones of Karnataka (NE Transition Zone — Kalaburagi, Yadgir) • Census 2011 — Karnataka population density facts
KAS 2024 Dec	<ul style="list-style-type: none"> • Protected Areas of Karnataka — highest area (sq. km) — Nagarhole/BRT Tiger Reserve etc. • Ramsar Sites of Karnataka — newly added in 2024 (Magadi Kere, Ankasamudra etc.) • Waterfalls of Karnataka — identify from description

2.3 INDIAN POLITY

Polity contributes a stable 12–20 questions per year. The subject is divided into Constitutional Framework, Central Government, and State/Local Government & Bodies.

A. Constitutional Framework

[i] Schedules, Articles, and Amendments are tested every single year — the most consistent topic in Polity. Supreme Court judgements are also regular.

KAS 2010	<ul style="list-style-type: none"> • Sources of Indian Constitution • Important cases related to Fundamental Rights • Schedules
KAS 2011	<ul style="list-style-type: none"> • DPSP • Schedules • Important cases & Supreme Court judgements
KAS 2014	<ul style="list-style-type: none"> • Preamble • Basic Structure Doctrine • Rights • Features of Indian Polity
KAS 2015	<ul style="list-style-type: none"> • Schedules matching (3rd, 4th, 8th, 10th Schedules) • 26th Amendment — Privy Purses abolition • Inner Line Permit States • Prohibition writ — definition • Constitutional Articles matching (155, 201, 213, 312)
KAS 2017	<ul style="list-style-type: none"> • Schedules, Articles & Amendments • Constituent Assembly Committees • State Reorganisation Committee
KAS 2020	<ul style="list-style-type: none"> • Schedules, Articles & Amendments • Fundamental Rights • Important cases & Supreme Court judgements
KAS 2024 Dec	<ul style="list-style-type: none"> • Article 164(1A) — minimum Ministers in States • Article 38 — DPSP (reduce inequalities in income) • Sixth Schedule — Autonomous District Councils • Citizenship Act 1955 — Supreme Court upheld provisions • Impeachment process of President — stages • Women's Reservation (106th Amendment) — provisions & limitations

B. Central Government

[i] President's powers, Parliament (sessions, motions, committees), and important Committees & their Chairmen are tested every year without fail.

KAS 2010	<ul style="list-style-type: none"> • President • Vice-President • Council of Ministers
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	<ul style="list-style-type: none"> • Parliament — LS, RS, Languages • Important Bills and Articles
KAS 2011	<ul style="list-style-type: none"> • President • Parliament — Sessions, Committees, Conventions • Bills and Acts • Bicameralism
KAS 2014	<ul style="list-style-type: none"> • Council of Ministers • Services under Union Government • Parliament — Writs • Sessions of Parliament
KAS 2015	<ul style="list-style-type: none"> • Calling Attention Motion — features (Indian innovation, urgent issues) • Committee on Public Undertakings — composition/elections • Pardoning Power of President — scope (courts martial, death sentence) • Constituent Assembly Committees — Dr. Rajendra Prasad as chairman of which • States Reorganisation Commission 1953 — chairman & members • Committees and Chairmen (Hartog, States Reorganisation etc.) • President's Veto powers
KAS 2017	<ul style="list-style-type: none"> • President — Powers & Functions • Parliament — Writs, Motions, Parliamentary Committees • Important Committees and Chairman
KAS 2020	<ul style="list-style-type: none"> • President — Powers & Functions • Council of Ministers • Parliament — Motions • Judiciary — Appointment of District Judges
KAS 2024 Dec	<ul style="list-style-type: none"> • Bill lapsing — conditions (Rajya Sabha, joint session, Lok Sabha dissolution) • EVM & VVPAT — statements • Lists of Constitution — matching Union/State/Concurrent list subjects • North-East Development Scheme 2022-2026 • Vibrant Villages Programme — statements • Pocket Veto of President — comparison with US • National Security / Anti-defection statements

C. State Government, Local Government & Constitutional/Non-Constitutional Bodies

KAS 2011	<ul style="list-style-type: none"> • Legislative Council • Important committees formed by state govt.
KAS 2014	<ul style="list-style-type: none"> • Emergency Provisions • Election Commission of India • Finance Commission of India • National Commission for Women (Non-Constitutional)
KAS 2015	<ul style="list-style-type: none"> • Autonomous District Councils — tribal areas (Sixth Schedule)

	<ul style="list-style-type: none">• Anti-Defection Act — 52nd Amendment• State Legislatures — Karnataka (Delimitation)• Panchayati Raj Act 1993 Karnataka — enforcement date
KAS 2017	<ul style="list-style-type: none">• Emergency Provisions• Panchayat Raj Act 1993 (Karnataka)
KAS 2020	<ul style="list-style-type: none">• Political Thinkers (System of Govt)• UPSC — Constitutional Body• GST Council
KAS 2024 Dec	<ul style="list-style-type: none">• Recognition of Political Parties — rules (state party criteria)• Sixth Schedule ADC provisions — tribal areas• Doha/Istanbul/Moscow Processes (Afghanistan — though technically IR)• Recognition of Political Party in State — thresholds• Mission Shakti Scheme — women's safety• ODOP matching (Karnataka districts)• State Finance / Karnataka administration

2.4 ECONOMY

Economy is the DOMINANT subject in KAS Paper 1 — contributing 19–35 questions per year. It spans nine sub-categories. Government Schemes (national + state) is the single biggest Economy sub-category.

[i] Economy was 35 Qs in 2014 and 34 Qs in 2020. Even in 2024 Dec (18 Qs), Economy remains a top-3 subject.

A. GDP, GNP & National Income Terms

KAS 2010	<ul style="list-style-type: none"> • State Income Estimation • GDP • Procurement Prices
KAS 2011	<ul style="list-style-type: none"> • National Income • Insurance Penetration
KAS 2014	<ul style="list-style-type: none"> • Per Capita Income • NDP & NNP • Birth Rate • Fragmentation of Land Holdings
KAS 2015	<ul style="list-style-type: none"> • Deflation — definition and effects
KAS 2017	<ul style="list-style-type: none"> • HDI Ranking
KAS 2020	<ul style="list-style-type: none"> • GNP Concept
KAS 2024 Dec	<ul style="list-style-type: none"> • GDP Deflator — statements (difference from CPI, uses nominal & real GDP) • Types of goods — Giffen goods, Inferior goods, Normal goods (matching)

B. Planning, Poverty & Unemployment

KAS 2010	<ul style="list-style-type: none"> • 11th Five Year Plan (×2) • Chair of Planning Commission
KAS 2011	<ul style="list-style-type: none"> • Industrial Cities
KAS 2014	<ul style="list-style-type: none"> • 3rd Five Year Plan • Industrial Licensing Policy 1991 • Sen Measure of Poverty • Rural Development Programmes
KAS 2015	<ul style="list-style-type: none"> • Employment Elasticity — definition (% change in employment per 1% GDP growth) • Agricultural Marketing & Farmer-friendly Reform Index
KAS 2017	<ul style="list-style-type: none"> • Employment Elasticity • Agri-Reform Index

	<ul style="list-style-type: none"> • Indian Railway Strike 1974 — leader (George Fernandes)
KAS 2020	<ul style="list-style-type: none"> • Types of Unemployment • NDC (National Development Council) • Human Poverty Index
KAS 2024 Dec	<ul style="list-style-type: none"> • Effects of Deficit Financing — on inflation, debt, interest rates • All India Quarterly Establishment based Employment Survey (AQEES) — statements

C. Banking & Monetary Policy

KAS 2010	<ul style="list-style-type: none"> • SLR • Revenue Deficit • Broad Money
KAS 2011	<ul style="list-style-type: none"> • Priority Sector Lending
KAS 2014	<ul style="list-style-type: none"> • Bharatiya Mahila Bank
KAS 2015	<ul style="list-style-type: none"> • RBI — Capital Adequacy Ratio, ATM linking, MPC interest rates (statements) • EXIM Bank — which Five Year Plan it was established
KAS 2017	<ul style="list-style-type: none"> • Quantitative Tools (CRR, SLR, Repo, Reverse Repo) • RBI — functions and role • EXIM Bank
KAS 2020	<ul style="list-style-type: none"> • Open Market Operations
KAS 2024 Dec	<ul style="list-style-type: none"> • Indian Money Markets — Call money, T-bills, CDs, CPs (matching) • M3 Money Supply — components (B, D, E) • RBI — Contractionary monetary policy tools (SLR increase, MSF cut)

D. Taxation & Fiscal Policy

KAS 2010	<ul style="list-style-type: none"> • Types of Taxes
KAS 2011	<ul style="list-style-type: none"> • Fiscal Deficit — Primary Deficit distinction
KAS 2014	<ul style="list-style-type: none"> • Types of Taxes — matching with categories (Stamp duties, Succession taxes, Income tax, Excise)
KAS 2015	<ul style="list-style-type: none"> • Corporation Tax — who it is levied on (companies, not individuals) • Types of Taxes — which is NOT a non-tax revenue (Interest Tax)
KAS 2017	<ul style="list-style-type: none"> • Nil
KAS 2020	<ul style="list-style-type: none"> • Types of Taxes (×2) • Non-Tax Revenue • GST Council

KAS 2024 Dec	<ul style="list-style-type: none"> • FRBM Act 2003 — statements (incorrect statement identification, targets, GDP percentage) • Finance Commission — horizontal tax devolution criteria • Revenue vs Capital distinction (Acquiring technology = Capital expenditure)
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E. Financial Markets & Inflation

KAS 2010	<ul style="list-style-type: none"> • WPI Base Year • SEBI
KAS 2011	<ul style="list-style-type: none"> • Food Inflation — WPI • Credit Rating Agencies
KAS 2014	<ul style="list-style-type: none"> • Decontrol of Fuel Prices • Kirit Parikh Committee (fuel prices)
KAS 2015	<ul style="list-style-type: none"> • SEBI — autonomous since 1992/1993 • Bank acquisition of FreeCharge (Axis Bank)
KAS 2017	<ul style="list-style-type: none"> • Deflation — definition
KAS 2020	<ul style="list-style-type: none"> • Capital Market • SEBI
KAS 2024 Dec	<ul style="list-style-type: none"> • Cost-push inflation — effects on economy (statements: wages, employment, investment) • Most inflationary measure (Creating new money to finance deficit)

F. Balance of Payments & International Trade

KAS 2010	<ul style="list-style-type: none"> • India's BOP Estimation
KAS 2011	<ul style="list-style-type: none"> • Current Account • FDI Retail Trade
KAS 2014	<ul style="list-style-type: none"> • Current Account • FDI Inflows • Common Market, FTA, Customs Union, Economic Union — differences
KAS 2015	<ul style="list-style-type: none"> • Current Account — classification (two categories) • Sovereign Gold Bond Scheme — statements
KAS 2017	<ul style="list-style-type: none"> • Current Account
KAS 2020	<ul style="list-style-type: none"> • LERMS (Liberalised Exchange Rate Management System) • Trade Costs • Forex Market • Payment Methods

KAS 2024 Dec	<ul style="list-style-type: none"> • LERMS — year of institution (April 1992) • India's Electronics Export — statements (FY23 exporter, smartphones share, US/China markets)
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G. International Organisations

KAS 2010	<ul style="list-style-type: none"> • WTO — WIPO • World Development Report
KAS 2011	<ul style="list-style-type: none"> • BRIC
KAS 2014	<ul style="list-style-type: none"> • SAARC • BRICS Bank (NDB) • ASEAN FTA • BIMSTEC • WTO — Uruguay Round
KAS 2015	<ul style="list-style-type: none"> • UNSC — permanent/non-permanent members, veto • BRICS Youth Forum 2017 — host country (China) • Country declaring independence from IMF/World Bank
KAS 2017	<ul style="list-style-type: none"> • Nil
KAS 2020	<ul style="list-style-type: none"> • World Bank
KAS 2024 Dec	<ul style="list-style-type: none"> • World Development Report 2024 — statements • Djibouti Code of Conduct — what it describes • Blue Helmet — definition (UN Peacekeepers) • NATO Plus — member countries (US, UK, Australia, New Zealand, Japan + Israel)

H. Budget & Economic Survey

KAS 2010	<ul style="list-style-type: none"> • Sex Ratio — 2011 Census
KAS 2011	<ul style="list-style-type: none"> • Decadal Growth Rate of Population • Child Sex Ratio — 2011 Census • IMR & MMR reduction
KAS 2014	<ul style="list-style-type: none"> • Water Requirement Report • Cumulative Deprivation Index
KAS 2015	<ul style="list-style-type: none"> • Payments Regulatory Board proposal — Budget 2017-18 statements • Karnataka Bank — A1+ rated scheduled commercial bank, HQ (Mangalore)
KAS 2017	<ul style="list-style-type: none"> • Karnataka — Literacy Rate • Payments Regulatory Board (Budget 2017-18)
KAS 2020	<ul style="list-style-type: none"> • Union Budget — Healthcare allocation • State Allocation to RDPR (Karnataka)

	<ul style="list-style-type: none"> • State Budget Size
KAS 2024 Dec	<ul style="list-style-type: none"> • Union Budget components — descending order (Revenue Expenditure, Revenue Receipts, Capital Receipts, Capital Expenditure) • SFIO — Serious Fraud Investigation Office, under which ministry • AQEES — All India Quarterly Employment Survey, findings

I. Government Schemes & Current Affairs

KAS 2010	<ul style="list-style-type: none"> • NRHM • JNNURM • Mid Day Meal Scheme
KAS 2011	<ul style="list-style-type: none"> • National: India-Export Services, Swabhimaan, RKVY, MGNREGA, Rashtriya Swasthya Bhima, Janani Suraksha, Back Region Grant Fund, Total Sanitation Campaign • State: Suvarna Gramodaya, Ganga Kalyana, Bhoo Chetana, Karnataka Udyog Mitra, Pancha Soulabhya, Suvarna Arogya Chaitanya, CWC
KAS 2014	<ul style="list-style-type: none"> • National: WDP, Higher Education Policy, PM Jan Dhan, Export Promotion Capital Goods, MGNERGA, HRIDAY • State: Namma Mane, Sakala Mission, Ksheera Bhagya, Manaswini, Krishi Aranya Protsaha, Bala Sanjeevini, Social Forestry
KAS 2015	<ul style="list-style-type: none"> • National: Janani Suraksha Yojana, Kilkari Scheme, PMAY-CLSS, Electoral Bonds, UDAN • State: Sandhya Suraksha, Bhagyalakshmi, Anna Bhagya, Udyogini, Post Office PSK • CA: Sovereign Gold Bond
KAS 2017	<ul style="list-style-type: none"> • National: Sovereign Gold Bond, Janani Suraksha Yojana, Kilkari Scheme, PMAY-CLSS, Electoral Bonds, UDAN • State: Sandhya Suraksha, KSDMRS, Bhagyalakshmi, Anna Bhagya, MM Santwana Harish, Udyogini, Post Office PSK
KAS 2020	<ul style="list-style-type: none"> • National: NFSM, PM KISAN, Make in India, MOOC • State: Unnathi, Pourakarmika Gruha Bhagya, Mathru Poorna, Devaraj Urs Housing, Rajeev Awas Yojana Karnataka, Jana Sevak, Yeshaswini, Raitha Sarathi Yojane, Jalamrutha Scheme • Current Affairs: Central Ganga Authority, School Bag Weight
KAS 2024 Dec	<ul style="list-style-type: none"> • National: PM E-DRIVE, Biofuel schemes (multiple), Mission Shakti, Vibrant Villages Programme, AQEES, North-East scheme • State: ODOP (One District One Product), Swavalambi Sarathi Scheme, Digital Detox Initiative • CA: Chip 4/Fab 4 Alliance, Bletchley Declaration on AI

2.5 ENVIRONMENT & ECOLOGY

Environment grew from 0 questions in 2010 to 13 questions in 2014 and 10 in 2020. In 2024 December Paper 2, it surged to 20 questions — the fastest-growing section in KAS.

Environment & Ecology — Year-wise Topics

[i] Highest-frequency topics: Environmental Conventions (appeared in 2014, 2015, 2017), IUCN Status/Red Data Book, Tiger Reserves, National Parks & Biosphere Reserves.

KAS 2010	<ul style="list-style-type: none"> • Nil (Environment absent in 2010 KAS Paper 1)
KAS 2011	<ul style="list-style-type: none"> • Sanctuaries in Karnataka • Institutions related to Biodiversity (State Biodiversity Board) • Tribals & Protected Wildlife (Blackbuck) • Wetlands & their importance • Environment Hypothesis — 'The World is Green' Hypothesis • Disease spread by wild species (Dengue) • Acid Rains — SO₂ & NO_x • Eutrophication • Biological Interactions — Commensalism, Mutualism • Formation of Ground-level Ozone
KAS 2014	<ul style="list-style-type: none"> • National Parks in India (State-wise) • Conservation Organisations — Eco-clubs • Environmental Committees — Dr. K. Kasturi Rangan (Western Ghats) • National Parks & Sanctuaries in Karnataka — numbers • Biodiversity Hotspot (Himalayas) • Ex-situ Conservation — Seed Banks • Environmental Conventions (4 major: Rio, Kyoto, Montreal, Basel) • Biosphere Reserves of India (State-wise distribution) • National Symbols (Wildlife-based) • Tiger Population (census) • Nutrient Cycle, Energy Flow • Inverted Pyramid (ecological) • Food Chains — Heterotrophs, Autotrophs, Plants & Predators
KAS 2015	<ul style="list-style-type: none"> • Wildlife Sanctuaries in Karnataka — animals (Chinkara, Blackbuck, Four-horned Antelope, Sloth Bear) • Sendai Framework for Disaster Risk Reduction — location of Sendai (Japan) • India-UN Office signed cooperation on Sendai Framework
KAS 2017	<ul style="list-style-type: none"> • World Wetlands Day (Feb 2) • Important Species in India & IUCN Status • Tiger Reserves in India • Kigali Agreement 2016 — Montreal Protocol amendment (HFCs) • Hydrofluorocarbons (HFCs) & their environmental impact • Environmental Conventions & main objectives
KAS 2020	<ul style="list-style-type: none"> • World Nature Conservation Day (July 28) • Basic Key Terms — Ecological Niche

	<ul style="list-style-type: none">• Red Data Book of IUCN• Earthworm Species used in Vermicomposting• Environmental Emergency — Galapagos Islands (Ecuador)• National Parks — State/UT with highest number in India (A&N Islands)• Basic Key Terms — Population, Community, Ecosystem, Ecosphere• Species adaptations — Biomes (Desert lizards)• Eco-development — definition• Food Web
KAS 2024 Dec	<ul style="list-style-type: none">• Protected Areas of Karnataka — highest area (Nagarhole, Bhadra, BRT etc.)• Ramsar Sites of Karnataka — newly added in 2024• Polar Vortex — features and disruption effects• Karst Topography features (sinkholes, stalagmites)• Djibouti Code of Conduct (maritime conservation/environment)• Pantanal — largest tropical wetland, South American countries

2.6 SCIENCE & TECHNOLOGY

Science & Technology contributes 14–31 questions per year in Paper 1, and 20–30 in Paper 2. It is divided into General Science (Biology, Chemistry, Physics) and Applied S&T (Space, IT, Defence, Energy, Health).

A. Biology (General Science)

[i] Biology questions shifted from basic cell biology (2010–2011) to more conceptual and applied biology (genetics, plant physiology) by 2024.

KAS 2010	<ul style="list-style-type: none"> • Enzymes • Carbohydrates • Animal Cell Organelles — Mitochondria • Sweat Glands • Xylem
KAS 2011	<ul style="list-style-type: none"> • Vitamins A, B, C, D, E & Folic Acid • Cold Smoking • Autotrophs, Heterotrophs, Saprophytes, Carnivores • Blood Group
KAS 2014	<ul style="list-style-type: none"> • Autotrophs & Heterotrophs • Hormones — Serotonin (properties) • Plant Cell Organelles • Modification of Roots (types) • Human Evolution — Dinosaur presence eras (Paleozoic, Cenozoic, Mesozoic)
KAS 2015	<ul style="list-style-type: none"> • Plant & animal Biology — Root modifications (Which are root modifications?) • Genetics — Colour blindness probability (parents normal, grandfather colour-blind) • Mosquito — diseases it does NOT transmit (Leishmaniasis)
KAS 2017	<ul style="list-style-type: none"> • Study disciplines — Entomology (insects), Mycology (fungi), Phycology (algae), Desmology (ligaments)
KAS 2020	<ul style="list-style-type: none"> • Factors affecting Milk compositions • Soybean Meal — protein content • Digestive System — Large Intestine functions • Botany — Phototropism, Auxin
KAS 2024 Dec	<ul style="list-style-type: none"> • Phototropism — plant bending towards uneven watering (auxin distribution) • Space Biology — Muscle atrophy in astronauts (microgravity) • Astronomer star colours — brightest stars (O-type/Blue stars) • Cyclist balance — gyroscopic effect

B. Chemistry (General Science)

KAS 2010	<ul style="list-style-type: none"> • Volume of water due to temperature • Fuse wire composition • Soap preparation ingredients • Alcohols • Wrought Iron (purest) • Separation — Primary & Secondary treatment • Earth Crust composition • Moore's Law & Rocks Law
KAS 2011	<ul style="list-style-type: none"> • Semiconductor Laser • Electromagnetic Spectrum • Instruments & Uses (Anemometer, Aneroid Barometer, Micrometer, Fathometer) • Polycarbonate materials (Polycarbonates, PVC, Polyamide, Polythene) • Carbon: types of coal • Resins
KAS 2014	<ul style="list-style-type: none"> • Conductors & Semiconductor • Artificial Ripening Agents • Mass Number • Atoms — Protons, Neutrons, Electrons • Conductivity — Ice frozen • Analytical Chemistry — Electromagnetic Spectrum & wavelengths
KAS 2015	<ul style="list-style-type: none"> • Agricultural Revolutions — Golden (fruits), Grey (fertilizer), Blue (fish), Yellow (oil seed), Pink (prawn), Round (potato) • KMF (Karnataka Cooperative Milk) — 2nd largest dairy in India, 13 Milk Unions
KAS 2017	<ul style="list-style-type: none"> • Organic Acids — Pyruvic, Acetic, Lactic, Uric acid • Hydrocarbons — Methane, Ethane, Propane • Carbon Allotropes — Graphene • Inorganic Salts — water hardness (NaCl, KBr, CaCl₂, MgCl₂) • Chemicals & Applications (CCl₄, Iodoform, Acetone, Acetylene) • Atoms — Protons, Neutrons, Electrons
KAS 2020	<ul style="list-style-type: none"> • Alkaloids — Colchicine, Pyrethrum, Glory Lily, Sarpagandha — sources • Inorganic Metallic Constituents
KAS 2024 Dec	<ul style="list-style-type: none"> • Cloud — primarily a dispersion of (water droplets or ice crystals)

C. Physics (General Science)

KAS 2010	<ul style="list-style-type: none"> • Rotation of the Earth • Acceleration • Doppler Effect • Mirror • Surface Tension
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KAS 2011	<ul style="list-style-type: none"> • Asteroid Belt
KAS 2014	<ul style="list-style-type: none"> • Rain falling — Direction and velocity • Force & Displacement — Cohesive force, Adhesive Force, Density • Earth year / Light year • Kepler's Laws • Weights at poles & equator • AC and DC currents
KAS 2015	<ul style="list-style-type: none"> • Flag-pole shadow at noon — identifies location (between Tropics, where sun is overhead)
KAS 2017	<ul style="list-style-type: none"> • Mirror Images • Heavy point mass — Pendulum • Pressure
KAS 2020	<ul style="list-style-type: none"> • Weight & mass in space — Hypergravity, Microgravity • Forces — Centrifugal, Centripetal, Frictional
KAS 2024 Dec	<ul style="list-style-type: none"> • Cyclist balance — gyroscopic effect / angular momentum • JWST — infrared wavelength range of electromagnetic spectrum

D. Applied S&T — Space, IT, Defence, Energy, Biotechnology

[i] Applied S&T (Space missions, Defence systems, Digital tech, AI, Cybersecurity) is GROWING rapidly in 2024. Bletchley Declaration, Chip 4, SVOM, and Malware types are new additions.

KAS 2010	<ul style="list-style-type: none"> • PSLV C-14 • Search Engine • Sky colour at night
KAS 2011	<ul style="list-style-type: none"> • Satellite orbits — factors affecting operations • Jet engine & Rockets • PSLV — other satellites • Router (networking) • Bio gas (Biotechnology)
KAS 2014	<ul style="list-style-type: none"> • CARTOSAT-1 & RISAT-1 & 3 — Earth observation satellites • 4G TD-LTE technology — first launched in India (Kolkata) • Hydropower Classification — micro/mini/small (capacity levels) • Helicopter — make identification (Feb 2015 Aero India) • Genetically Modified Organisms — techniques used
KAS 2015	<ul style="list-style-type: none"> • NASA OSIRIS-REx mission — objective (asteroid sample return) • Synlight (artificial sunlight for research) • Kaizala app — Microsoft productivity app • DRDO unmanned remotely operated tank, Chennai
KAS 2017	<ul style="list-style-type: none"> • Aircraft — Tejas, SRAS, Lakshya (Defence) • Power generation — thermal, hydro, nuclear; Cadmium in reactor • Chang'e 4 — Chinese spacecraft, first to land far side of moon • DRDO unmanned tank rolled out in Chennai • HFCs/CFCs & conventions (Basel, Vienna, Stockholm, Helsinki)

	<ul style="list-style-type: none"> • Scientists — Sir Ashutosh Mukherjee (First Indian Science Congress), B.M. Hege
KAS 2020	<ul style="list-style-type: none"> • PARAM 8000, Anupama series supercomputers • Nuclear technology — nuclear reactor & uranium • Missile — AAM, Astra, Akash, Prithvi • Vermicompost — Earthworms example (Biotechnology) • Health hazards pollutants — Carbon Monoxide
KAS 2024 Dec	<ul style="list-style-type: none"> • SVOM Satellite — joint development (India? France-China) • Chandrayaan-2 — element mapped first time (Sodium) • Small Modular Reactors — statements • Gi-Fi (Gigabyte Fidelity) technology — statements • Snowblind/Mirai/Stuxnet/Ryuk — types of malware/ransomware • Chip 4 / Fab 4 Alliance — member countries • Bletchley Declaration on AI Safety — 2023 • Karnataka Data Centre Policy 2022-27

E. Health, Pollutants & Distinguished Personalities

KAS 2010	<ul style="list-style-type: none"> • HIV • Itai-Itai Disease • Astigmatism, Myopia, Hypermetropia • Radioactive Radiation Pollution
KAS 2011	<ul style="list-style-type: none"> • Southern Blotting / ELISA • Haemodialysis • Decay of Taj Mahal — Petroleum refinery products
KAS 2014	<ul style="list-style-type: none"> • Bird Flu — H5N1 influenza virus • Immunoglobulins — types of immunity (Natural Active, Natural Passive, Artificial Active, Artificial Passive) • Dr. Salim Ali — ornithologist • Venkataram Ramakrishna — Ribosome Nobel Prize, organism used (Thermus thermophilus) • Dr. Anandkumar (surgeon), Dr. Deviprasad Shetty
KAS 2015	<ul style="list-style-type: none"> • Bird Flu — Influenza virus type (H5N1) • Immunoglobulins — Active Immunity, Passive Immunity, Vaccination
KAS 2017	<ul style="list-style-type: none"> • Khaira Disease • Angioplasty • HFCs/CFCs — Conventions (Basel, Vienna, Stockholm, New Helsinki) • Ozone Layer
KAS 2020	<ul style="list-style-type: none"> • Health hazards pollutants — Carbon Monoxide • Precision Agriculture & cattle breeds (Horticulture)
KAS 2024 Dec	<ul style="list-style-type: none"> • WHO — India eradicated from which diseases (Yaws, Kala-azar, Maternal/Neonatal Tetanus) • Essential nutrients for human body

SECTION 3: NEW EMERGING TOPICS — 2024 DECEMBER

3.1 International Relations — Emerged as New Category

International Relations appeared for the first time as a distinct category in KAS 2024 December Paper 1. Previously, international topics were scattered within Economy (International Organisations) or Current Affairs sections.

Topic	Context / What to Know
Djibouti Code of Conduct	Maritime cooperation framework for Indian Ocean region; addresses piracy and crime
Doha / Istanbul / Moscow Format (Afghanistan)	Peace process mechanisms for Afghanistan; Doha process = Taliban-US talks 2020
Blue Helmet / UN Peacekeepers	Definition and role of UN peacekeeping forces globally
Chagos Archipelago	UK handover to Mauritius — recent sovereignty transfer
NATO Plus	Members — US, UK, Australia, New Zealand, Japan, Israel
Countries bordering Iran	Land borders — Turkey, Iraq, Armenia, Azerbaijan, Turkmenistan, Afghanistan, Pakistan
Reskilling Revolution	WEF initiative launched 2020 — 1 billion people by 2030
Countries bordering Israel	Lebanon, Syria, Jordan, Egypt, Palestine (Gaza & West Bank)
India's civilian honour from foreign nations	Grand Order of Yellow Star from Suriname to President Droupadi Murmu
Classical Language Status	Union Cabinet conferred status to Marathi, Pali, Prakrit, Assamese, Bengali

3.2 Applied S&T — Cyber/Digital Expansion in 2024

- Chip 4 / Fab 4 Alliance (Semiconductor supply chain — US, Taiwan, Japan, South Korea)
- Gi-Fi (Gigabyte Fidelity) technology — 60 GHz band, ultra-high speed
- Malware types — Snowblind (Android malware), Mirai (IoT botnet), Stuxnet (ICS/SCADA), Ryuk (ransomware)
- Bletchley Declaration on AI Safety — 2023 (28 countries including India)
- SVOM Satellite — France-China joint mission for gamma-ray burst detection
- Small Modular Reactors (SMRs) — features and safety
- Vishvasya — India's digital certification platform
- Karnataka Data Centre Policy 2022-27 — investments and regulations

INWISE JNANAMEDHA IAS

KPSC KAS PRELIMS

PREVIOUS YEAR QUESTION ANALYSIS

Subject-wise Weightage, Themes & Trends

Papers Analysed: 2014 | 2015 | 2017 | 2024 (August) | 2024 (December)

Paper 2 (GS-2) — Comprehensive Theme Analysis

SECTION 1: PAPER 2 — OVERALL STRUCTURE & WEIGHTAGE

Paper 2 (GS Paper II) focuses on General Aptitude, Karnataka-specific Knowledge, Science & Technology, Reasoning, and Quantitative Aptitude. Its structure has evolved significantly — from a 5-section paper in 2014 to a more integrated format by 2024.

Section-wise Question Distribution Across Years

Section (Paper 2)	2014	2015 *	2017 †	2024 Aug‡	2024 Dec	Key Change / Trend
Karnataka General Awareness	23	35	40	23‡	30	↑ Most specific in 2024; hyper-current focus
Science & Environment	47	30	25	47‡	20	↓ Declining in pure science; current-affairs S&T up
Reasoning & Mental Ability	11	15	20	11‡	20	→ Stable count; harder in 2024 (Probability, Geometry)
Quantitative Aptitude / DI	13	20	15	13‡	10	↓ Merged into Reasoning; DI stable
Ethical / Situational Judgment	3	10	5	3‡	0	↓↓ Phased out completely in 2024
English Comprehension	6	15	0	6‡	0	↓↓ Phased out completely in 2024
TOTAL QUESTIONS	100	100	100	100	100	Fixed at 100 per paper

- * 2015 Paper 2 contains 2017-era references (PSLV C-37 Feb 2017, Aero India 2017); exam held around 2017
- † 2017 Paper 2 contains 2019-20 references; exam likely held in 2020
- ‡ 2024 August Paper 2 is a re-examination with identical content to KAS Prelims 2014 Paper 2
- 2024 December Paper 2 is the most recent, with English & Ethics sections completely absent
- Number of questions may vary due to cancelation and overlapping of content in other topics and paper 1

SECTION 2: PAPER 2 — DETAILED THEME ANALYSIS

2.1 KARNATAKA GENERAL AWARENESS

Karnataka General Awareness is the single largest and most consistent section of Paper 2, contributing 23–40 questions per exam. It covers State Schemes, Administration & Governance, Agriculture, Culture, and Budget. This section is UNIQUE to KAS and has no parallel in UPSC.

★ This section is the biggest differentiator for KAS aspirants. Deep, specific knowledge of Karnataka — not generic India knowledge — is essential.

A. Government Schemes & Programmes

[i] State schemes are tested every year in high volume. 2024 December saw scheme questions become extremely specific — beneficiary details, launch dates, objectives all tested. Government schemes alone contribute 8–15 questions per paper.

KAS 2014	<ul style="list-style-type: none"> • Sakala Mission — ISO certification, national awards, World Bank funding • Ksheerabhadra Programme — milk provision days per week to school children • Manaswini scheme — pension for unmarried/divorcee BPL women (age, amount) • MGNREGA — wage-to-material expenditure ratio (60:40) • Bala Sanjeevini — Tertiary Medicare for anganwadi children • Krishi Aranya Protsaha Yojane — tree planting scheme (subsidised seedlings) • HRIDAY scheme — Heritage City Development (Hampi in Karnataka) • Tubachi-Babaleswar Lift Irrigation — north Karnataka water scarcity
KAS 2015	<ul style="list-style-type: none"> • Sandhya Suraksha Scheme — eligibility criteria (age 60+, income ≤₹25,000) • Karnataka Govt doorstep services scheme (Jana Sevak-era) • Pourakarmika Gruha Bhagya Yojana — max construction area (500 sq.ft.) • Mathru Poorna scheme — nutritional needs of pregnant/lactating women in rural areas • Devaraj Urs Housing Scheme — details/statements • Rajiv Awas Yojana — slum-free Karnataka target year • Highways upgradation — ADB/World Bank \$346 million loan • Jalamrutha scheme — Karnataka water conservation (launched Feb 2019)
KAS 2017	<ul style="list-style-type: none"> • Unnathi scheme — startups & entrepreneurs from marginalised backgrounds (6 Oct 2018 order) • Pourakarmika Gruha Bhagya — max construction (500 sq.ft.) • Mathru Poorna scheme • Jana Sevak scheme — doorstep government services 2020 • Yeshaswini scheme — related to (health insurance for farmers) • Devaraj Urs Housing Scheme — key provisions • Rajiv Awas Yojana — Karnataka slum-free by

	<ul style="list-style-type: none"> • Karnataka Budget 2019-20 — RDPR % of gross allocation • Karnataka Budget 2020-21 — Mahadayi Irrigation allocation (₹ crore) • Karnataka Budget 2019-20 — Budget size • Karnataka Raita Sarathi Yojana — main objective (supply inputs to farmers) • Karnataka Budget highways upgradation bank loan • Robert Bruce Foot Archaeological Museum 2020 — location • Ekalavya Award — cash prize amount • Namma Smaraka scheme details
KAS 2024 Aug	<ul style="list-style-type: none"> • Same as 2014 Paper 2 — re-examination paper
KAS 2024 Dec	<ul style="list-style-type: none"> • Pragati Patha scheme — women self-help / vocational training • Karnataka Raitha Samruddhi Yojane — guidance & support for farmers • Karnataka Budget 2024-25 — Spice Park district (Kodagu — under PPP) • Karnataka Budget 2024-25 — CM presentation date (February 16, 2024) • Karnataka Budget 2024-25 — sector-wise expenditure ranking • Digital Detox initiative Karnataka — details/statements • Shiksha Copilot — AI education tool statements • Swavalambi Sarathi Scheme — transport/auto drivers welfare • Karnataka Renewable Energy Policy — cleared by State Govt statements • Karnataka Electricity distribution companies (HESCOM, BESCO, GESCOM etc.) • Airports/Airstrips/Helipads — corporation/board entrusted (KIADB or KSIIDC?) • Source of irrigation with highest % share in Karnataka (Wells/Borewells)

B. Karnataka Administration & Governance

[i] Administration questions cover KERC, municipal corporations, Rajya Sabha seats, land records systems, and milestone colour-coding. 2024 introduced BBMP digital services and specific municipal body details.

KAS 2014	<ul style="list-style-type: none"> • Electricity Tariff determination — Karnataka Electricity Regulatory Commission (KERC) • Mayor & Deputy Mayor tenure — Karnataka Municipal Corporation Act 1976 (1 year) • Rajya Sabha seats for Karnataka State (12) • Plastic Waste (Management & Handling) Rules 2011 — thickness ban (40 microns < banned) • Investment limit for Small Scale Manufacturing Enterprise • Kilometre stone colour-coding (White + Brilliant Green top = State Highway)
KAS 2015	<ul style="list-style-type: none"> • Dr. Rajkumar Award 2016 recipient • Karnataka MP Shobha Karandlaje — Parliamentary Observer for which election

	<ul style="list-style-type: none"> • Agromet Forecasting Research Centre location • Town Municipal Council President term (5 years) • GI tag crop recently accorded (Cotton/Spices in Karnataka)
KAS 2017	<ul style="list-style-type: none"> • Solid Waste Management Rules 2016 — under which Act (Environment Protection Act 1986) • Karnataka Govt school bag weight max % of child's weight (10%) • New species Gecko — found at (Osmania University researchers, Telangana) • Karnataka Rajyotsava Award 2019 — for Cooperation field • Karnataka Rajyotsava Award 2019 — for Bayalata (Open field play) • 84th Akhila Bharatha Kannada Sahitya Sammelana — president • Dr. Gubbi Veeranna Award 2018 — theatre/rangabhumi • Basava Prashasti 2018 — by Karnataka Government • Padma Shri 2019 — Archaeologist from Karnataka (Choodamani Nandagopal) • Post Office / Postman statue Belagavi — second; first in Karnataka at (Dharwad)
KAS 2024 Aug	<ul style="list-style-type: none"> • Same as 2014 Paper 2 — re-examination
KAS 2024 Dec	<ul style="list-style-type: none"> • BBMP Nambike Nakshe — online building plan approval (plot size, timeline) • Rajyotsava Awards 2024 — details (₹1 lakh, 20g gold, committee, 69 awardees) • Menstrual Leave Policy Karnataka — days (6 paid), sectors covered • Karnataka State Wildlife Board (SBWL) headed by (Chief Minister) • City Corporations in Karnataka — list • Which corporation develops Airports/Airstrips/Helipads in Karnataka • Source of irrigation highest % in Karnataka (Wells & Borewells) • Padma Awards 2024 from Karnataka — person and field matching

C. Karnataka Agriculture, Dairy & Animal Husbandry

[i] Agricultural revolutions (Golden, Blue, Grey, Pink, Round, Yellow) and Karnataka cattle breeds (Amrithmahal, Hallikar) are recurrent topics. KMF appears in 2014 and 2015.

KAS 2014	<ul style="list-style-type: none"> • SW Monsoon — 80-90% of rainfall during South-west Monsoon season • Dual-purpose cattle breeds of Karnataka — Amrithmahal & Hallikar • Coffee production Karnataka — major State, important districts (Coorg, Chikkamagalur, Hassan NOT Tumkur) • National Institute of Wind Energy — location (Chennai) • KMF — 2nd largest dairy, 13 Milk Unions, Bengaluru Urban highest procurement
KAS 2015	<ul style="list-style-type: none"> • GI Goods Act 1999 — Karnataka handloom registered (Mysore Silk Saree, Ilkal Saree) • Agricultural revolutions — Golden (Fruits), Grey (Fertilizer), Blue (Fish), Yellow (Oil seed), Pink (Prawn), Round (Potato) • KMF — statements about cooperative milk federation

	<ul style="list-style-type: none"> • Geographical Indication (GI) Tag — crop accorded recently
KAS 2017	<ul style="list-style-type: none"> • NFSM — National Food Security Mission aims (Rice, Wheat, Pulses production) • Raita Sarathi Yojana — main objective (providing inputs to farmers) • Cattle breed indigenous to Karnataka (Amrithmahal, Hallikar, Khillari) • Soybean meal preferred over Groundnut cake — reason (amino acid profile/protein quality) • Precision agriculture — definition (application of IT & sensors to improve management) • KMF / dairy cooperatives — statements
KAS 2024 Aug	<ul style="list-style-type: none"> • Same as 2014 Paper 2 — re-examination
KAS 2024 Dec	<ul style="list-style-type: none"> • Karnataka Raitha Samruddhi Yojane — farmer guidance & support • Spice Park district Karnataka Budget 2024-25 (Kodagu, PPP) • Source of irrigation highest % Karnataka (Wells & Borewells) • Project Madhunetri — Karnataka honey/beekeeping project (NABARD/Dept. of Agriculture)

D. Karnataka Culture, Awards, Sports & Personalities

[i] Dr. Salim Ali, Kumara Vyasa Award, Padma Awards from Karnataka, Rajyotsava Awards — all appear regularly. Sports personalities associated with Karnataka appear frequently in post-2017 papers.

KAS 2014	<ul style="list-style-type: none"> • Bhoomi/UPOR/Mojani/Nadakacheri — land records web application (UPOR = pre-mutation 11E sketches) • Dr. Salim Ali — Ornithologist • Ashok Chakra — President Pranab Mukherjee presented to widow of Mukund Vardarajan (Bravo Field) • Kumara Vyasa Award 2013 — Karnataka Kannada & Culture Department recipient • Byalalu in Ramanagaram — Mangalyaan tracking station • Navarasapura Utsav — associated with Music
KAS 2015	<ul style="list-style-type: none"> • Dr. Rajkumar Award 2016 — recipient (Saroja Devi) • Who won 2019 Kendra Sahitya Akademi Award • Srihari Nataraj — sport (Swimming) • Nandita Naganagoudar — sport (Weightlifting) • 66th National Film Awards — Best Female Playback Singer • 'Srivatsa Smriti' — book author
KAS 2017	<ul style="list-style-type: none"> • Padma Shri 2019 — Archaeologist from Karnataka • Basava Prashasti 2018 — by Karnataka Government • Dr. Gubbi Veeranna Award 2018 — theatre/Rangabhumi • Rajyotsava Award 2019 — Cooperation field • Rajyotsava Award 2019 — Bayalata field • 84th Akhila Bharatha Kannada Sahitya Sammelana — president who presided • Kannada scholar who saved Hampi monuments — recently deceased • National Bravery Award 2019 winners from Karnataka

KAS 2024 Aug	<ul style="list-style-type: none">• Same as 2014 Paper 2 — re-examination
KAS 2024 Dec	<ul style="list-style-type: none">• Rajyotsava Awards 2024 — details and incorrect statements• Padma Awards 2024 from Karnataka — person & field matching• Research institution centres in Karnataka — list• Namma Smaraka scheme — Karnataka heritage/cultural preservation• Bengaluru Open Golf Championship 2019 winner

2.2 SCIENCE, ENVIRONMENT & TECHNOLOGY

Science & Environment contributes 20–47 questions across all Paper 2 exams. In 2014 it was the largest section (47 Qs); by 2024 it has declined to ~20 Qs in count but has become significantly more current-affairs linked and conceptual.

[i] General Science questions (Biology, Physics, Chemistry at 10th-12th level) dominated 2014–2017. By 2024 December, questions are more applied — Space missions, Ecology, Environmental conservation, Technology policy.

A. Biology & Life Sciences

[i] Biology covers Cell organelles, Genetics, Ecology, Taxonomy, Human Physiology. Root modification, genetics probability, and food chain classification are highly recurrent.

KAS 2014	<ul style="list-style-type: none"> • Plant cell organelles — Chloroplast (Photosynthesis), Mitochondria (Respiration), Nucleus (Secretion?), Ribosomes (Protein synthesis) • Root modifications — Rhizome of ginger (stem), Tuber of sweet potato (root ✓), Bulb of onion (stem), Sucker of banana (stem) • Genetically Modified Organisms — techniques (insertion, removal, mutation, silencing) • Venkataram Ramakrishna Nobel 2009 — Ribosome characterisation, organism used (<i>Thermus thermophilus</i>) • Dinosaurs present during — Mesozoic Era • Colour blindness genetics — husband/wife normal, both grandfathers colour-blind, probability daughter colour-blind (0%) • Mosquito transmits except — Leishmaniasis (transmitted by sandfly) • Factors responsible for variation in milk composition
KAS 2015	<ul style="list-style-type: none"> • IUCN Status matching — Nilgiri Tahr (Endangered), Kashmir Red Stag (Critically Endangered), Pygmy Hog (Critically Endangered), Bramble Cay Melomys (Extinct) • BSI new Zingiber species — found in (Andaman & Nicobar Islands) • Muscle fatigue — accumulation of Lactic Acid • Study disciplines — Entomology (Insects), Mycology (Fungi), Phycology (Algae), Desmology (Ligaments) • Lung healing after smoking cessation — cilia regeneration
KAS 2017	<ul style="list-style-type: none"> • Earthworms for Vermicomposting — species (<i>Eisenia fetida/Lumbricus rubellus</i>) • Soybean meal preferred over Groundnut cake/Fish meal — amino acid profile, tryptophan content • Desert lizard adaptations — nocturnal, pale colour, burrowing, water from food • Evenness in species distribution measured using (Shannon-Wiener Index) • Efficiency of energy transfer through food webs — false statement (10% law) • Large intestine statements — no digestion, water absorption, Vitamin K production by bacteria • Astronauts calcium loss in space — disuse osteoporosis/weightlessness • Interferons — glycoproteins that stimulate synthesis of antiviral proteins

	<ul style="list-style-type: none"> • Plant phototropism — auxin unequal distribution causes bending towards light • Red Data Book — documentation of rare & endangered species of plants, animals, microorganisms, fungi
KAS 2024 Aug	<ul style="list-style-type: none"> • Same as 2014 Paper 2 — re-examination
KAS 2024 Dec	<ul style="list-style-type: none"> • Muscle atrophy during space missions — primarily due to Microgravity (reduced gravity/disuse) • Plant bending towards light (uneven watering) — Auxin redistribution (phototropism mechanism) • WHO diseases eradicated in India — Yaws, Kala-azar, Maternal & Neonatal Tetanus, Polio • Essential nutrients for human body — Carbohydrates, Proteins, Fats, Vitamins, Minerals, Water • Bioassay — measuring chemical concentration in biological fluids to assess environmental health • Indicator species — definition and examples (sensitive species indicating ecosystem health) • Litter feeder earthworm type — Epigeic (e.g., Eisenia fetida)

B. Environment & Ecology

[i] Environment has grown from 9 Qs in 2014 to 12 Qs in 2024 Dec. New topics in 2024: Kelp Forests, Blue Flag Programme, Neelakurinji, NCAVES, Pantanal, Living Root Bridges — conservation science is now central.

KAS 2014	<ul style="list-style-type: none"> • Nutrient cycle movement in ecosystem — always Cyclic • Inverted Pyramid — Numbers (Parasitic food chain), Biomass (Pond ecosystem) • Biodiversity Hotspot in India — Himalayas (factual based) • Primary producer in food chain — Plants (not just Autotrophs or Heterotrophs — specific answer) • Ex-situ conservation — Seed Bank (not Wildlife Sanctuary, Sacred Grooves, National Park) • Biosphere Reserves — State-wise matching (Dehang-Dabang: Arunachal, Manas: Assam, Simlipal: Odisha NOT Jharkhand, Agasthyamalai: TN/Kerala NOT Karnataka) • Environmental Conventions — UN Climate Poland (Dec 2008), Basel (hazardous waste 1989 ✓), Montreal Protocol (ozone 1987 ✓), Vienna (CITES — INCORRECT — Vienna = Ozone not CITES) • National Parks & Sanctuaries Karnataka — total count (5 NPs, 27 Sanctuaries or 6 & 25) • Western Ghats ESA — Karnataka villages included per Kasturirangan report (approx 1500)
KAS 2015	<ul style="list-style-type: none"> • IUCN Status matching — Nilgiri Tahr, Kashmir Red Stag, Pygmy Hog, Bramble Cay Melomys • Great Barrier Reef threats — Surface water temperature rising & Crown-of-Thorns Starfish (NOT oil/tourism alone) • Eucalyptus ban in Malnad area — Karnataka Govt banned Eucalyptus plantation

	<ul style="list-style-type: none"> • Eco-development — definition (in-situ conservation involving local communities) • Jalamrutha scheme Karnataka — water conservation & rejuvenation
KAS 2017	<ul style="list-style-type: none"> • Ecological Niche — definition (role/function of organism in ecosystem) • Evenness in species distribution — Shannon-Wiener Index • Energy transfer through food webs — false statement (energy diminishes; 10% rule) • Biodiversity hotspot criteria — >1500 endemic plant species & >70% habitat loss • Wildlife Sanctuaries Karnataka — animals (Ranebennur=Blackbuck, Daroji=Sloth Bear, Yadahalli=Chinkara, Rangayyanadurga=Four-horned Antelope) • Tiger count Karnataka — 2018 All India Tiger Estimation (524 or 406?) • National Food Security Mission — production enhancement target • Red Data Book — what it documents
KAS 2024 Aug	<ul style="list-style-type: none"> • Same as 2014 Paper 2 — re-examination
KAS 2024 Dec	<ul style="list-style-type: none"> • Ramsar Sites — State-wise matching (recently added Ramsar sites across India) • Kelp Forests — statements (habitat for marine biodiversity, found in cold water) • Blue Flag Programme — certification for beaches (clean, safe, accessible environment) • NCAVES project 2017 — Natural Capital Accounting & Valuation of Ecosystem Services — incorrect statement • Indian Leopard — statements about distribution, conservation, IUCN status • Neelakurinji flowers — statements (Strobilanthes kunthiana, blooms once in 12 years, Shola forests) • Project Madhunetri — Karnataka honey/beekeeping project • Jingkieng Jri (Living Root Bridges) — Meghalaya, Khasi/Jaintia tribes, secondary roots of Ficus elastica • Pantanal — largest tropical wetland, Brazil/Bolivia/Paraguay • Marine mammals identification (Dolphins, Whales, Seals, Sea otters, Dugongs) • Compensatory Afforestation Fund Act 2016 — statements • WCCB Special Operations — Wildlife Crime Control Bureau operations

C. Physics

[i] Physics questions test Newton's Laws, surface tension, electromagnetic spectrum, Kepler's law, motion in trains/cars. In 2024 these become more applied — cyclist gyroscopic balance, star colours, JWST wavelength.

KAS 2014	<ul style="list-style-type: none"> • Rain falling vertically — man running east, rain appears from East (vector addition) • Semiconductor — suitable impurities added to increase electrical conductivity (doping)
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	<ul style="list-style-type: none"> • Surface tension — water spreads on glass (adhesive > cohesive), mercury spherical (cohesive > adhesive) • Minute hand displacement in one hour — Displacement is zero; Average velocity is zero • Kepler's Law — Earth at $\frac{1}{4}$ distance from sun, year duration = $\frac{1}{8}$th of present year • Weight at equator vs poles — less at equator (earth bulged at equator, less gravity) • AC mains tester — neutral terminal at same voltage as ground (earthed) • Ice frozen surface of lake — conductivity of ice is low; lake bottom not frozen • Coherent/incoherent motion of clock hands • Motion in a moving car — ball thrown vertically upward, lands back on the person (Newton's 1st law)
KAS 2015	<ul style="list-style-type: none"> • Ball thrown vertically in car moving with constant velocity — lands on the person (inertia) • Flag pole casting no shadow at noon — person lives between Tropics (equator region) • Muscle fatigue — lactic acid accumulation (related to biochemistry/physics of fatigue)
KAS 2017	<ul style="list-style-type: none"> • Railway track curve — outer edge raised higher than inner (banking for centripetal force) • Two trains speed ratio — cross man in 27s & 17s, cross each other in 23s • Nuclear Fuel Cycle — statements about enrichment, fission, waste • Supercluster of galaxies — Saraswati supercluster in constellation Pisces • Air-to-Air missile — Astra (India's indigenous beyond visual range missile) • Sitting in car constant velocity — ball thrown up lands back (Newton's law, inertia)
KAS 2024 Aug	<ul style="list-style-type: none"> • Same as 2014 Paper 2 — re-examination
KAS 2024 Dec	<ul style="list-style-type: none"> • Cyclist balance — Gyroscopic effect / Angular momentum of wheels • Star colours — brightest stars are O-type (blue stars, ~30,000–50,000K) • JWST wavelength range — Infrared range of electromagnetic spectrum • Chandrayaan-2 — element mapped for first time on Moon (Sodium) • Cloud — primarily a dispersion of water droplets (colloid) • Logical equivalence: 'If it rains, I take umbrella' \equiv 'If I don't take umbrella, it doesn't rain' (contrapositive)

D. Chemistry & Chemical Science

[i] Chemistry covers organic acids, semiconductors, hard water constituents, artificial ripening, alkaloids. 2024 reduced direct chemistry, shifting to applied science.

KAS 2014	<ul style="list-style-type: none"> • Semiconductor doping — impurities added to increase electrical conductivity • Artificial ripening of fruits — gas used is Ethylene (not acetylene, methane, ethane) • Hormone causing wakefulness/sleepiness — Adenosine (not Adrenaline, Thyroxine, Serotonin) • Mass number — equals sum of protons + neutrons (not electrons) • Electromagnetic spectrum increasing wavelength order — Gamma < X-ray < UV < Visible < Infrared < Microwave < Radio
KAS 2015	<ul style="list-style-type: none"> • Muscle fatigue — Lactic Acid accumulation • Zingiber pseudosquarrosus — BSI new ginger species, ethnomedical properties • Metallic constituents of hard water — Calcium (Ca²⁺) and Magnesium (Mg²⁺) ions • Colchicine alkaloid — obtained from Glory Lily (Gloriosa superba)
KAS 2017	<ul style="list-style-type: none"> • Metallic constituents of hard water — Calcium & Magnesium salts (sulphates/bicarbonates) • Colchicine alkaloid source — Colchicum autumnale (Autumn Crocus) / Gloriosa superba • Interferons — glycoproteins stimulate synthesis of antiviral proteins • Gas used for artificial ripening — Ethylene
KAS 2024 Aug	<ul style="list-style-type: none"> • Same as 2014 Paper 2 — re-examination
KAS 2024 Dec	<ul style="list-style-type: none"> • Cloud composition — primarily dispersion of water droplets • Bioassay — process of measuring chemical concentration in biological fluids

E. Space Technology, Defence & IT

[i] PSLV missions (PSLV C-37 with 104 satellites) appears in 2015 and 2017. Defence missiles (Astra, Prithvi) appear regularly. 2024 introduces JWST, Chandrayaan-2, helicopter manufacturing in Karnataka.

KAS 2014	<ul style="list-style-type: none"> • CARTOSAT-1 & 2, RISAT-1 & 3, SARAL — Earth Observation Satellites • 4G TD-LTE — first started in India in Kolkata (by Airtel) • India-based Neutrino Observatory (INO) — Pottipuram, Tamil Nadu • Prithivi II missile — part of IGMDP; naval variant Dhanush; range 250 km (NOT 5000 km) • Helicopter matching — Seaking MK41 (Germany), KA-226T (Russia), AS-565 MB Panther (France), SA-321 Super Frelon (France)
KAS 2015	<ul style="list-style-type: none"> • PSLV C-37 — 104 satellites, Feb 2017, India 1st country to launch 104 satellites on single rocket; Cartosat-2 + INS-1A/1B + 101 international nanosatellites; Antrix = commercial arm of ISRO • Aero India 12th show (2019) — theme 'Air Power Beyond Boundaries' • Aerostat vehicle / missile identification — Air-to-Air: Astra
KAS 2017	<ul style="list-style-type: none"> • PSLV C-37 — 104 satellites Feb 2017; India first, Cartosat-2, Antrix Corporation

	<ul style="list-style-type: none"> • Aero India 2019 — 12th edition, theme • Supercomputing PARAM in India — statements (PARAM 8000, PARAM Ananta, PARAM Shivay) • Air-to-Air missile — Astra (Indigenous BVR missile by DRDO) • Byalalu Ramanagaram — ISRO Spacecraft Control Centre (Mangalyaan tracking)
KAS 2024 Aug	<ul style="list-style-type: none"> • Same as 2014 Paper 2 — re-examination
KAS 2024 Dec	<ul style="list-style-type: none"> • JWST — James Webb Space Telescope, infrared range • Chandrayaan-2 — mapped Sodium for first time on Moon • India's largest helicopter manufacturing facility — Tumkur, Karnataka (HAL) • Karnataka Data Centre Policy 2022-27 — key statements/provisions • Shiksha Copilot — AI-based educational assistant, Karnataka Govt • EV revolution — BEE statements about Electric Vehicle adoption India

F. Health & Medicine

[i] Health topics: Immunity types (Natural/Artificial, Active/Passive), Bird Flu H5N1, IMR Karnataka, cardiac surgery personalities. 2024 shifts to WHO eradication, Kyasanur Forest Disease, Essential nutrients.

KAS 2014	<ul style="list-style-type: none"> • Immunity types — Natural Active (after infection), Natural Passive (mother to child), Artificial Active (vaccination), Artificial Passive (anti-rabies serum) • Bird Flu — caused by Influenza H5N1 (not H1N1, H7N1, H9N1) • First neonatal heart surgery — Dr. Anandkumar (not Dr. Deviprasad Shetty) • Average IQ of normal person — 90 to 110
KAS 2015	<ul style="list-style-type: none"> • Bird Flu virus type — H5N1 Influenza • Immunoglobulins — Natural Active (after small pox), Natural Passive (from mother), Artificial Active (vaccination), Artificial Passive (anti-rabies serum) • IMR (Infant Mortality Rate) of Karnataka — approximately 28 (at time of exam)
KAS 2017	<ul style="list-style-type: none"> • Astronauts calcium loss — disuse osteoporosis (weightlessness/microgravity) • Interferons — glycoproteins; stimulate antiviral protein synthesis • Muscle fatigue mechanism • After quitting smoking — lungs heal due to cilia regeneration
KAS 2024 Aug	<ul style="list-style-type: none"> • Same as 2014 Paper 2 — re-examination
KAS 2024 Dec	<ul style="list-style-type: none"> • WHO — diseases eradicated from India (Yaws, Kala-azar, M&NT, Polio) • Essential nutrients — Carbohydrates, Proteins, Fats, Vitamins, Minerals, Water

	<ul style="list-style-type: none">• Kyasanur Forest Disease — KFD virus, tick-borne, Karnataka (Shivamogga)• Bioassay — measuring environmental health through biological fluids
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2.3 REASONING & MENTAL ABILITY

Reasoning consistently contributes 11–20 questions per exam. In 2024 December, Reasoning became significantly harder — introducing Probability, Geometry (lines, circles), and Logical Equivalence alongside traditional puzzle types.

[i] Types tested: Seating Arrangements, Blood Relations, Coding-Decoding, Number Series, Syllogism/Fact-based, Definition-based, Ethical/Situational Judgment (2014-2017 only).

A. Seating Arrangements

[i] Square table, linear bench, and queue-based seating arrangements are the most frequent reasoning type. Typically 3–4 questions around a single arrangement in each exam.

KAS 2014	<ul style="list-style-type: none"> • Square table seating — Eight friends E,F,G,H,I,J,K,L (two per side); 3 girls not adjacent; J between L & F; H second left of J; F opposite E; determine J & K relationship
KAS 2015	<ul style="list-style-type: none"> • Eleanor's speaker seating arrangement — 5 speakers (Gary, Heloise, Jarrod, Kate, Lane); moderator seat #3; attorney not next to explorer; Lane is pilot; writer & attorney beside moderator (Q9-11) • Seating bench arrangement — Five friends A,B,C,D,E (Q36-38: who is between C&E, neighbour of G, position of E from left) • Family seating — 5 friends on bench (A,B,C,D,E) (Q77) • Queue arrangement — positions and relative positions (Q42)
KAS 2017	<ul style="list-style-type: none"> • Speaker seating arrangement — 5 speakers with roles (pilot, writer, attorney, explorer, moderator); seat constraints (Q9-11): who is moderator, where is Jarrod, what is Jarrod's occupation • Five friends A,B,C,D,E on a bench — order determination (Q77) • Family seating — J,K,L,M,N,O, two married couples, professions (Q74) • Seven subjects refresher course scheduling 22-29 July — timetable constraints (Q82-83)
KAS 2024 Aug	<ul style="list-style-type: none"> • Same as 2014 Paper 2 — re-examination
KAS 2024 Dec	<ul style="list-style-type: none"> • Seating arrangement — 7 people C,D,E,F,G,H,I in a row; Q36: who is between C and E; Q37: neighbour of G; Q38: position of E from left • Queue position — A is 7th from front, B is 15th from front and 21st from back; find A's position from back • Figure classification into three classes — Venn diagram/visual reasoning (Q31)

B. Blood Relations & Family Puzzles

KAS 2014	<ul style="list-style-type: none"> • Married couples profession puzzle — Lawyer married to D (housewife); C engineer married to F (professor); A married to housewife; E not housewife — find married couple (A and B)
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KAS 2015	<ul style="list-style-type: none"> • Blood relation — Rupesh introduces Poonam as daughter of only son of my father's wife → Poonam is Rupesh's Sister (father's wife's only son = Rupesh himself, so Poonam = Sister) • Blood relation — Deepak says 'boy playing football is younger brother of daughter of my father's wife' → boy is Deepak's Brother
KAS 2017	<ul style="list-style-type: none"> • Family profession puzzle — J,K,L,M,N,O; K is doctor father of N; O is grandfather of L (contractor); M is grandmother of N (housewife); determine J's profession
KAS 2024 Aug	<ul style="list-style-type: none"> • Same as 2014 Paper 2
KAS 2024 Dec	<ul style="list-style-type: none"> • Blood relations — Rupesh introduces Poonam as 'daughter of only son of my father's wife' → Poonam is Sister • Blood relations — Deepak says 'boy playing is younger of two brothers of daughter of my father's wife' → boy is Deepak's Brother

C. Coding-Decoding, Series & Number Patterns

[i] MADRAS → NBESBT coding pattern (shift +1) appears in BOTH 2015/2017 AND 2024 December Paper 2 — a rare cross-year repeat. Always memorize this pattern.

KAS 2014	<ul style="list-style-type: none"> • Venn Diagram — Rectangle (married), Circle (joint family), Triangle (teachers); find region representing married people in joint family but not teachers
KAS 2015	<ul style="list-style-type: none"> • Coding — MADRAS → NBESBT (each letter +1); what is BOMBAY → CPNCBZ • Series — 3, 10, 101 ... next number is 10202 ($n^2 + 1$ pattern: $1^2+2=3$, $3^2+1=10$, $10^2+1=101$, $101^2+1=10202$) • Number theory — product of two numbers = 47,915; HCF = 37; find sum ($37 \times (a+b)$ where $axb = 47915/37^2$)
KAS 2017	<ul style="list-style-type: none"> • Coding — MADRAS → NBESBT (each consonant/vowel shifts +1); BOMBAY coded as CPNCBZ • Missing number in series — pattern identification
KAS 2024 Aug	<ul style="list-style-type: none"> • Same as 2014 Paper 2
KAS 2024 Dec	<ul style="list-style-type: none"> • Coding — MADRAS → NBESBT; BOMBAY = CPNCBZ (shift pattern: each letter +1) • Missing number series (Q32) — identify pattern and fill in

D. Syllogism, Definition-based & Logical Equivalence

[i] Ethical/Situational Judgment (2014: 3 Qs) and Definition-based questions (2015: Lease violation, Restitution, Speculation, Guarantee, Embellishment) have been phased out by 2024. Instead, Logical Equivalence and formal Syllogism have increased.

KAS 2014	<ul style="list-style-type: none"> • Situational judgment — municipal commissioner: pig menace vs MLA community; bullet injures child
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	<ul style="list-style-type: none"> • Situational judgment — police officer: controversial film vs local protests/stone-throwing • Situational judgment — senior administrative officer: bomb blast at 7:30 PM in market
KAS 2015	<ul style="list-style-type: none"> • Fact-based reasoning — Jessica: 4 children, 2 blue eyes/2 brown, half girls → cannot determine eye colour of girls • Fact-based — All hats have brims; There are black/blue hats; Baseball caps are hats → Baseball caps have brims • Fact-based — All chickens are birds; Some chickens are hens; Female birds lay eggs → Some hens lay eggs • Fact-based — Most stuffed toys stuffed with beans; Stuffed bears & tigers; Some chairs stuffed with beans → Cannot determine if bears are stuffed with beans • Fact-based — Pictures tell a story; All storybooks have pictures; Some storybooks have words → All storybooks tell a story • Definition-based — Violating Apartment Lease (prohibited action by tenant) • Definition-based — Restitution (compensating for property damage) • Definition-based — Speculation (assuming from inconclusive evidence)
KAS 2017	<ul style="list-style-type: none"> • Definition-based — Guarantee (quality promise in writing or verbal) • Definition-based — Embellishing the Truth (adding fictitious details) • Gandhiji's views — opposed industrialization because (preserving village self-sufficiency) • Gandhiji's dream of rural paradise not shared by (Nehru/Ambedkar — supported industrialization) • Syllogism (Two statements, three conclusions) — Logical deduction from given premises • Logical equivalence — 'If it rains, I take umbrella' \equiv contrapositive
KAS 2024 Aug	<ul style="list-style-type: none"> • Same as 2014 Paper 2 — re-examination
KAS 2024 Dec	<ul style="list-style-type: none"> • Syllogism — two statements, three conclusions; identify logically correct conclusions (Q44) • Logical equivalence — 'If it rains, I take umbrella' \equiv 'If I don't take umbrella, it doesn't rain' (contrapositive) (Q89) • Adults > Boys > Girls > Families; no family < 3 children; find minimum families (Q46) • Figure classification into three classes — visual/Venn diagram reasoning (Q31)

2.4 QUANTITATIVE APTITUDE & DATA INTERPRETATION

Quantitative Aptitude contributes 8–20 questions per Paper 2. In 2014-2017, it was a distinct section with standard arithmetic problems. By 2024, it merged with Reasoning, and advanced topics like Probability, Combinatorics and Number Theory replaced basic arithmetic.

A. Arithmetic — Profit/Loss, Time-Distance, Interest, Work

[i] SAME SET of arithmetic problems (HCF, Clock, Percentage marks, Time-Distance, Digit interchange) appears in both 2015 AND 2017 Papers — high probability of repetition.

<p>KAS 2014</p>	<ul style="list-style-type: none"> • Profit & Loss — umbrella sold ₹300 at 20% gain; 10% rebate; find new gain % (8%) • Simple Interest — borrowed at 6%/9%/13% for 3/5/3 years; total ₹8160 in 11 years; find principal (₹8000) • Speed-Distance-Time — express train 100 km/hr; stops 3 min after every 75 km; 600 km journey time (6 hr 21 min) • Exponential growth — seeds double daily; 1 seed takes 30 days for 200 sqm; 2 seeds take (29 days) • Revenue optimization — fare ₹x; passengers = (50-x); maximize revenue → ₹25 • Triangles in figure — rectangle with two diagonals (8 triangles) • Cube painting — 4x4x4 cube painted (3.5 litres); cut to maximum smaller cubes; additional paint needed
<p>KAS 2015</p>	<ul style="list-style-type: none"> • HCF problem — product of two numbers = 47,915; HCF = 37; find sum • Clock problem — at what time between 3-4 o'clock hands point opposite directions (3:49 approximately) • Percentage marks — 30% in first paper (180 marks); need 50% overall (both papers 180+150=330); % needed in second paper (66.67%) • Time-distance — meeting at 11 AM; person 100 km away starts at 9:45 AM at 60 kmph; late by (10 min) • Two-digit number — product of digits = 14; add 45 = digits interchange; number = (27: 2x7=14, 27+45=72 ✓) • Parking scooters — 36 vehicles; after 1st car=1 scooter, after 2nd car=2 scooters...; scooters in second half of row • Training college scheduling — 7 subjects 22-29 July; timetable constraints • Examination pass marks — 36% needed; student gets 113; failed by 85; maximum marks = (550)
<p>KAS 2017</p>	<ul style="list-style-type: none"> • HCF/LCM — product = 47,915; HCF = 37; sum • Clock — at what time between 3 & 4 o'clock hands point in opposite directions • Percentage marks — Physics paper calculations • Time-distance — meeting punctuality problem • Two-digit number — product of digits = 14; add 45 = interchange • Parking scooters — vehicles in second half • Train scheduling puzzle — 7 subjects 22-29 July • Examination maximum marks calculation

KAS 2024 Aug	<ul style="list-style-type: none"> • Same as 2014 Paper 2 — re-examination
KAS 2024 Dec	<ul style="list-style-type: none"> • Number of zeros in $2^{300} \times 5^{600} \times 4^{400} = 2^{1100} \times 5^{600} = 5^{600} \times 2^{600} \times 2^{500} \rightarrow \min(1100,600)=600$ trailing zeros (Q80) • If x is positive integer; $2x+91$ divisible by $x \rightarrow 91$ divisible by x; divisors of $91=\{1,7,13,91\}$; 4 values (Q81) • Diamond price \propto weight²; broke into 1:2:3:4; loss = ₹70,000; original price (Q82) • Digit manipulation — 5263187; odd digits +1, even digits -1; rearrange ascending; 3rd digit from left (Q83) • Tournament seeding puzzle — 64 players; ranked 43 won; who cannot be runner-up (Q84-87) • Lines dividing plane — 3 straight lines maximum 7 regions (Q45) • Circle 8 points — quadrilaterals vs triangles count (Q54) • $x\%$ more than B; $x\%$ of (A+B); find $x \rightarrow x = 100/(1+2) \times \dots$ algebraic solution (Q55)

B. Data Interpretation (Pie Charts, Bar Graphs, Line Graphs, Tables)

[i] Data Interpretation in 2014: Pie charts (institutes/students), Line graph (Swine flu statistics), Bar graph (population), Survey table (liquor ban). In 2017-2024: Karnataka Budget data, Tiger count, Irrigation allocation.

KAS 2014	<ul style="list-style-type: none"> • Pie Charts — Graduate & Post-Graduate students in 7 institutes (M,N,P,Q,R,S,T); total 27,300 grad + 24,700 PG; ratio PG:Grad for Institute S ($21\% \times 24700 : 14\% \times 27300 = 5187:3822 = 19:14$) • Line Graph — Swine flu Karnataka 2009-2015: positive cases and deaths per year; max % deaths year (2009: $120/135=88.9\%$); trend 2009-2014 (Fluctuating) • Bar Graph — Male/Female population 2008-2013; years male $\geq 10\%$ more than female • Survey table — liquor ban opinion: Men/Women; For/Against/No opinion; identify most appropriate statement (More men against ban) • Data interpretation questions — student institute distribution
KAS 2015	<ul style="list-style-type: none"> • Karnataka Budget data — RDPR allocation % • Population gender data interpretation • Swine flu statistics (if same as 2014 — re-exam component) • Karnataka budget size table (2019-20) • Mahadayi irrigation budget allocation • GI tag products matching • State-wise data questions • Infrastructure budget DI
KAS 2017	<ul style="list-style-type: none"> • Karnataka Budget 2019-20 — RDPR % of gross allocation (10%?) • Karnataka Budget 2019-20 — total budget size • Karnataka Budget 2020-21 — Mahadayi Irrigation allocation (₹ crore) • Tiger count Karnataka 2018 — All India Tiger Estimation (524 tigers?) • Football/Sports — scheduling or seating puzzle related to data

KAS 2024 Aug	<ul style="list-style-type: none"> • Same as 2014 Paper 2 — re-examination
KAS 2024 Dec	<ul style="list-style-type: none"> • Farm produce distribution — Sonu/Arya distribution puzzle (Q33-34: How much did Sonu receive, how many parcels did Arya receive) • Karnataka Budget 2024-25 — sector-wise expenditure ranking • Karnataka Budget 2024-25 — total outlay and allocation details • Karnataka Renewable Energy Policy — numerical details/targets

C. Probability, Combinatorics & Number Theory (NEW in 2024)

★ 2024 December introduced formal Probability and Combinatorics — a significant shift. Aspirants must now go beyond basic arithmetic and practice probability theory and geometric combinatorics.

KAS 2014	<ul style="list-style-type: none"> • Exponential growth — 1 seed doubles daily; takes 30 days for 200 sqm; 2 seeds take 29 days (halved time = N-1 days)
KAS 2015	<ul style="list-style-type: none"> • NA
KAS 2017	<ul style="list-style-type: none"> • Probability / Combination question
KAS 2024 Aug	<ul style="list-style-type: none"> • Same as 2014 Paper 2 — re-examination
KAS 2024 Dec	<ul style="list-style-type: none"> • Probability — 10ft pole randomly cut into 3 pieces; probability they form a triangle = 1/4 (Q47) • Geometry — 3 straight lines (infinite) divide plane into maximum 7 regions (Q45) • Circle combinatorics — 8 points on circle; C(8,4)=70 quadrilaterals; C(8,3)=56 triangles; difference=14 more quadrilaterals (Q54) • Adults > Boys > Girls > Families; min families if each family has ≥3 children (Q46) • Algebra — x% more than B and x% of (A+B); solve for x (Q55: $x=100/\sqrt{5}$ or $1/(1+\sqrt{5})\times 100$ — needs checking)

2.5 ETHICAL/SITUATIONAL JUDGMENT (2014–2017 ONLY)

Ethical/Situational Judgment appeared in 2014 (3 Qs), 2015 (10 Qs), and 2017 (5 Qs) but has been completely removed from 2024 December Paper 2. These questions tested administrative decision-making under conflict.

★ This section has been phased out. While aspirants should understand the concept for GS Mains, it no longer appears in Paper 2 Prelims as of 2024.

<p>KAS 2014</p>	<ul style="list-style-type: none"> • Pig menace vs MLA community — Municipal Commissioner scenario; bullet injures child — decide action (Suspend operations & keep quiet vs Dismiss authority vs Continue) • Controversial film protest — Police Officer scenario; stone-throwing by local youth; film producers have legal permission (Use force vs Discuss vs Ask to suspend release) • Bomb blast at 7:30 PM crowded market — DM scenario; got info at 7:35 PM (Rush to spot vs Alert authorities vs Call press meet vs Contact anti-terrorist squad)
<p>KAS 2015</p>	<ul style="list-style-type: none"> • Communal harmony — famous Karnataka temple arranges Iftar party for Muslims; which temple (Dharmasthala Manjunatha Temple) • Ethical dilemma — informer/whistleblower scenario • Public official integrity — bribe offer scenario • Selection Committee dispute — Chairman decides when two members argue equal rank (Evaluate pros & cons and decide) • Sugar shortage scenario — close friend's son's wedding; Govt limit 30 kg; friend requests 50 kg (Release as per rules) • Administrative integrity — transfer/posting scenario • RTI/transparency scenario • Disaster management priority scenario • Gender-based discrimination in office scenario • Environmental compliance vs development scenario
<p>KAS 2017</p>	<ul style="list-style-type: none"> • Sugar shortage — DM scenario; close friend requests 50 kg; Govt limit 30 kg; friendship vs duty (Release as per rules, explain to friend) • Gandhiji's views opposed industrialization — reason (village self-sufficiency, 'bread labour') • Gandhiji's rural paradise not shared by — (Nehru & Ambedkar supported industrialization) • Apartment Lease violation — definition-based scenario • Restitution — definition-based scenario (compensating for damage)
<p>KAS 2024 Dec</p>	<ul style="list-style-type: none"> • Ethical/Situational Judgment section completely ABSENT in 2024 December Paper 2

2.6 ENGLISH COMPREHENSION (2014–2015 ONLY)

English Comprehension was present in 2014 (6 Qs) and 2015 (8 Qs) but was completely removed by 2017 and absent in 2024 December Paper 2.

[i] Passages tested in 2014: Nehru's thoughts on Satyagraha, Rose vs. Gold (Rose Poem by Tagore context), and Globalization & Justice (Amartya Sen/Rawls). Questions tested ultimate authorial view, what the passage proposes, and winning arguments.

<p>KAS 2014</p>	<ul style="list-style-type: none"> • Passage 1 — Nehru on Satyagraha and non-cooperation movement (moral/ethical appeal, Bhagavad Gita calming effect) • Passage 2 — Rose vs Gold: delight through personality/rose transcends material value; universal language of joy • Passage 3 — Globalization & Justice: 'seen to be done'; Rawls' public framework; UN Secretary-General report on globalization & interdependence • Q95: Ultimate authorial view — non-cooperation offered what he wanted (option c) • Q97: Passage proposes — Expression of delight beyond external manifestation • Q99: Winning argument for globalization — (2 and 4: excellent overall goal + positive contribution)
<p>KAS 2015</p>	<ul style="list-style-type: none"> • Passages on governance/administration topics • Passages on Indian democracy and Constitution • Reading comprehension — Part F additional section • Questions on passage inference and fact-finding • Critical reading questions • Author's viewpoint questions • Passage on justice and equality • Passage on economic development
<p>KAS 2017</p>	<ul style="list-style-type: none"> • English Comprehension section ABSENT in 2017 Paper 2
<p>KAS 2024 Dec</p>	<ul style="list-style-type: none"> • English Comprehension section COMPLETELY ABSENT in 2024 December Paper 2