

INSPIRE IAS ACADEMY

UPSC PRELIMS - 2021 TEST SCHEDULE

S. NO.	DATE	SUBJECT	TOPICS COVERED
1		Polity 1	Constitutional Development + Preamble + Union Territories + Citizenship + FR + DPSP + FD + Other Constitutional Provisions such as Emergency Provisions etc.
2		Polity 2	Executive + Legislature + Judiciary
3		Polity 3	Fundamentals of Polity (NCERT)
4		Geography 1	Geomorphology + Indian Physiography
5		Geography 2	Climatology + Oceanography + Biogeography+ Indian Climate
6		Geography 3	Fundamentals of World + indian Geography (NCERT)
7		Economy 1	Basic Concepts of National Income + Budgeting + Fiscal and Monetary Policy Agricultural
8		Economy 2	External Sector + International Institutes + Money, Banking Financial Market and Other Provisions
9		Economy 3	Fundamentals of Economy (NCERT)
10		Current affairs	June + July + August 2020
11		Geography 4	Demography + Census + Economic Activities + Agriculture + Minerals + Energy Industry + Transport + Trade + Communication
12		Polity 3	Governance + Socio Economic Development + Reforms + Bills + Welfare Schemes + Policies
13		Environment 1	Environment and Ecology + Biodiversity
14		Environment 2	Environmental Pollution and Management + Climate Change + Global Warming+ Environmental Governance
15		Science & Technology 1	Fundamentals of Science : Biology + Everyday Science (NCERT)

INSPIRE IAS ACADEMY

S. NO.	DATE	SUBJECT	TOPICS COVERED
16		Current Affairs	Current affairs September + October 2020
17		Science & Technology 2	Biotechnology + Health + Defence + Space
18		Science & Technology 3	IT + Telecom + IPR + Nanotech + Robotics + Nuclear tech
19		History 1	Fundamentals of History (Ancient+Medieval+Modern) (NCERT)
20		Culture 1	Visual Arts + Performing Arts + Religions + Languages + Literature + Institutions
21		History 2	Ancient + Medieval India
22		History 3	Modern India (1757 – 1947)
23		Sectional Test 1	POLITY and GOVERNANCE
24		CSAT 1	CSAT - Reasoning
25		CSAT 2	CSAT - General Mental Ability
26		Sectional Test 2	ECONOMY
27		Current Affairs	November + December 2020
28		Sectional Test 3	ENVIRONMENT
29		Sectional Test 4	HISTORY AND CULTURE OF INDIA
30		Sectional Test 5	GEOGRAPHY
31		Sectional Test 6	SCIENCE AND TECHNOLOGY
32		CSAT 3	CSAT - Reading Comprehension
33		Mock 1	PAPER 1
34		Mock 2	PAPER 2
35		Mock 3	PAPER 1

S. NO.	DATE	SUBJECT	TOPICS COVERED
36		Mock 4	PAPER 2
37		Mock 5	PAPER 1
38		Mock 6	PAPER 2
39		Mock 7	PAPER 1
40		Mock 8	PAPER 2
41		Mock 9	PAPER 1
42		Mock 10	PAPER 2
43		Mock 11	PAPER 1
44		Mock 12	PAPER 2
45		Current Affairs	Jan + Feb 2021
46		Mock 13	PAPER 1
47		Mock 14	PAPER 2
48		Mock 15	PAPER 1
49		Mock 16	PAPER 2
50		Current Affairs	Economic Survey 2021 + Budget 2021 + IYB
51		Mock 17	PAPER 1
52		Mock 18	PAPER 2
53		Current Affairs	Mar + April 2021
54		Mock 19	PAPER 1
55		Mock 20	PAPER 2

Sub-Topic Listing

POLITY

Historical Background + Preamble + FR + DPSP + FD + Other Constitutional Provisions (Emergency, Citizenship etc.)

1. Historical evolution and features

- ▶ What is Constitution?
- ▶ Importance of Constitution
- ▶ Historical evolution of the Constitution
- ▶ Constituent Assembly
- ▶ Objectives of the Constitution
- ▶ Salient features of Indian Constitution
- ▶ Unitary features
- ▶ Federal features
- ▶ Parliamentary form of government
- ▶ Presidential form of government
- ▶ Parliamentary vs. Presidential system of government

2. Preamble

- ▶ Preamble
- ▶ Basic features
- ▶ Value premises of constitution
- ▶ Terminologies as:
 - ▶ Democratic
 - ▶ Sovereign
 - ▶ Socialist
 - ▶ Secular
 - ▶ Republic
 - ▶ Justice
 - ▶ Equality
 - ▶ Liberty
 - ▶ Fraternity
 - ▶ Integrity

3. Fundamental rights

- ▶ Meaning and importance of Fundamental Rights
- ▶ Right to equality
- ▶ Right to Freedom
- ▶ Right against Exploitation
- ▶ Right to Freedom of Religion
- ▶ Cultural and Educational Rights

- ▶ Right to Constitutional Remedies
- ▶ Difference between procedure established by law and due process of law
- ▶ Writs and their uses
- ▶ Restrictive limitations on fundamental rights

4. DPSP

- ▶ Basic features
- ▶ Directives
 - ▶ Economic and Social DPSP
 - ▶ Gandhian DPSP
 - ▶ Administrative DPSP
 - ▶ DPSP related to international peace
- ▶ Implementation of DPSP

5. Fundamental duties

- ▶ Features
- ▶ Link of Fundamental Rights and Fundamental Duties

6. Recent developments

- ▶ Fundamental Duties - Awareness Campaigns is the Duty of Centre
- ▶ National Anthem - Mandatory in Cinema Halls - Article 51(a)
- ▶ Prevention of Insults to National Honor Act, 1971
- ▶ Triple Talaq Issue
- ▶ Uniform Civil Code
- ▶ MGNREGA: Right to Work
- ▶ Making AADHAR Mandatory Violates Fundamental Rights

7. Citizenship

- ▶ Basic constitutional features
- ▶ Methodology of getting citizenship
- ▶ Modes of Losing the Citizenship of India
- ▶ Concept of dual citizenship
- ▶ Citizenship provisions in J&K
- ▶ Special privileges enjoyed by citizens in India



INSPIRE
IAS ACADEMY
The road to your dreams...

8. Panchayats

- ▶ Brief history
- ▶ Provisions of 73rd AA
- ▶ Role and functions of different tiers
- ▶ Provisions of 74th AA
- ▶ Role and functions of different tiers
- ▶ Municipal Corporations
- ▶ Municipal Councils
- ▶ Nagar Panchayats
- ▶ The steps taken towards women's empowerment
- ▶ Role of State Election Commission
- ▶ Role of State Finance Commission
- ▶ XIth and XIIth Schedules

9. The Scheduled And Tribal Areas

- ▶ 5th schedule areas
- ▶ 6th schedule areas
- ▶ Composition of autonomous councils
- ▶ Role and functions of councils
- ▶ Role of Governor with respect to tribal areas
- ▶ Tribal sub plan

10. Relations Between The Union And The States

- ▶ Administrative relations
- ▶ Legislative relations
- ▶ Financial relations
- ▶ Misuse of emergency powers
- ▶ Issue of devolution of funds
- ▶ Interstate council
- ▶ Zonal council
- ▶ Cooperative federalism concept

11. Services

- ▶ AIS
- ▶ State services
- ▶ Central services
- ▶ UPSC
- ▶ JPSC and SPSC

12. Tribunals

- ▶ Need of tribunals
- ▶ Salient features of tribunals
- ▶ Composition
- ▶ Procedure
- ▶ Powers and functions
- ▶ Different types of tribunals: some examples

13. Elections

- ▶ Adult franchise importance
- ▶ Constitutional provisions
- ▶ National and state party
- ▶ Types of elections

- ▶ Electoral reforms
- ▶ State funding
- ▶ Changes in Corporate Funding
- ▶ NOTA in Elections
- ▶ Nagaland Reservation in Urban Bodies
- ▶ E- Postal Ballot

14. Special Provisions Relating To Certain Classes

- ▶ Reservation of seats for Scheduled Castes and Scheduled Tribes in centre and state legislatures
- ▶ Representation of the Anglo-Indian Community
- ▶ National Commission for Scheduled Castes and Scheduled Tribes

15. Official language provisions

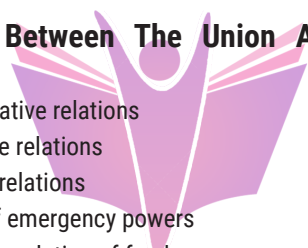
- ▶ Official language of the Union
- ▶ Commission and Committee of Parliament on official language
- ▶ Official language or languages of a State
- ▶ Official language for communication between one State and another or between a State and the Union
- ▶ Language of The Supreme Court, High Courts, etc.
- ▶ Special Officer for linguistic minorities

16. Emergency provisions

- ▶ National emergency
- ▶ State emergency
- ▶ Financial emergency
- ▶ Procedure of proclamation and removal of emergency
- ▶ Emergency and fundamental rights
- ▶ Impact of emergencies

17. Amendments

- ▶ Procedure of amendment
- ▶ Special majorities
- ▶ Important amendments
- ▶ Special provisions to different states
- ▶ Provisions related to NE states
- ▶ Provisions related to J&K



INSPIRE
IAS ACADEMY
The road to your dreams...

Executive + Legislature + Judiciary

1. Union and States

- ▶ State Reorganization Commission (brief)
- ▶ Components of Indian territory
- ▶ Process of formation of new states
- ▶ Zonal Councils
- ▶ Union territories
- ▶ Special provisions for states

2. The President

- ▶ Importance of President
- ▶ Qualification
- ▶ Election procedure
- ▶ Advantages and disadvantages of single transferable form of voting
- ▶ Presidents' Term of Office and emoluments
- ▶ Executive Powers
- ▶ Legislative Powers
- ▶ Emergency Powers
- ▶ Financial Powers
- ▶ Miscellaneous powers
- ▶ Judicial powers
- ▶ Presidents Impeachment
- ▶ President as nominal head

3. Vice President

- ▶ Office of the Vice-President
- ▶ Functions

4. Prime Minister

- ▶ Appointment of PM
- ▶ Functions of PM
- ▶ Role of PM with respect to
 - CoM
 - President
 - Lok Sabha
 - Political Party
 - Coalition Government

5. Council of Ministers

- ▶ Division of CoM
- ▶ Role of CoM
- ▶ Role of Cabinet
- ▶ Responsibilities of the Ministers

6. Attorney General of India

- ▶ Qualification

- ▶ Functions
- ▶ Powers with respect to parliament

7. Parliament

- ▶ Functions of Parliament
- ▶ Composition of Rajya Sabha
- ▶ Composition of Lok Sabha
- ▶ Qualification and disqualification of MPs
- ▶ Vacation of seats
- ▶ Sessions of parliament
- ▶ Law making procedure
- ▶ Officers of Parliament
- ▶ Parliament Proceedings
- ▶ Motions and resolutions in Parliament
- ▶ Powers and Privileges
- ▶ Budget making process
- ▶ Comparison of Lok Sabha and Rajya Sabha
- ▶ Types of majorities
- ▶ Special powers of RS

8. The Union Judiciary

- ▶ Integrated judicial system
- ▶ Supreme Court
 - Composition
 - Independence of Supreme Court
 - Jurisdiction of SC
 - Judicial Review
- ▶ High Court
 - Composition
 - Terms and removal
 - Jurisdiction
 - Other powers
- ▶ Lower judiciary
 - Appointment
 - Powers

9. Comptroller and Auditor-General of India

- ▶ Appointment
- ▶ Functions
- ▶ Role of CAG in good governance

10. The Governor

- ▶ Appointment, term of office, qualification, etc
- ▶ Powers
- ▶ Discretionary powers
- ▶ Ordinance making power



INSPIRE
IAS ACADEMY

The road to your dreams

<p>11. CM</p> <ul style="list-style-type: none"> ▶ Appointment ▶ Powers and responsibilities ▶ Relationship between the Governor and the Chief Minister ▶ Relationship between CoM and the Chief Minister <p>12. CoM</p> <ul style="list-style-type: none"> ▶ Division of CoM ▶ Role of CoM ▶ Role of cabinet ▶ Responsibilities of the Ministers <p>13. The Advocate-General for the State</p> <ul style="list-style-type: none"> ▶ Appointment ▶ Functions <p>14. State legislature</p> <ul style="list-style-type: none"> ▶ The composition of Vidhan Sabha and Vidhan Parishad ▶ Qualifications of the Members of Legislature ▶ Powers and Functions of State Legislature ▶ Relationship between both the Houses ▶ Officers of State Legislature ▶ Powers, Privileges and Immunities of State Legislatures and their Members ▶ Legislative procedure ▶ Governor's assent to Bills ▶ Procedure in Financial Matters/Budget <p>15. Recent updates</p> <ul style="list-style-type: none"> ▶ President Election Procedure (Rights to vote or not to vote) ▶ Concept of Office of Profit 	<ul style="list-style-type: none"> ▶ Types of CAG audit ▶ Committee of Governors Report <ul style="list-style-type: none"> ◦ Reforms in Parliament functioning to increasing efficiency ◦ Dilemma of delimitation ◦ Significance of WHIP ◦ Declaration of assets of MP's ◦ NOTA in Rajya Sabha polls ◦ Demand for a hybrid electoral system ◦ Various types of electoral systems ▶ First past the post system ▶ Proportional representation ▶ Mixed systems also sometimes referred to as Hybrid system <ul style="list-style-type: none"> ◦ Motion of Thanks ◦ Privileges to MP ◦ Ordinance making powers ◦ Parliamentary committees ◦ National Court of Appeal ◦ Middle Income Group Legal Aid Scheme ◦ Public Interest Litigation ◦ Criminal Defamation ◦ Capital Punishment ◦ E-Courts ◦ Tele-law initiative ◦ Pro-bono legal services ◦ Prison reforms ◦ Law panel on TRIBUNALS ◦ S.C Collegium proceedings in public domain ◦ Law Commission Report on United Nations Convention against Torture
---	--

Socio-Economic Development + Welfare Schemes + Governance + Reforms + Bills + Policies

<p>1. Social Sector Bills</p> <ul style="list-style-type: none"> ▶ The Juvenile Justice (Care and Protection of Children) Act ▶ 'Surrogacy (Regulation) Bill, 2016' ▶ 'Child Labor (Prohibition and Amendment) Bill, 2016' ▶ Maternity Benefit Bill, 2016 ▶ Pre-Conception & Pre-Natal Diagnostic Techniques (PNDT) Act ▶ Mental Health Care Bill, 2013 	<ul style="list-style-type: none"> ▶ Protection of Children from Sexual Offenses (POCSO) ▶ Anti Trafficking Bill with Stringent Penalty ▶ HIV and AIDS (Prevention and Control) Bill-2014 - Amendments ▶ Domestic Violence Act, 2005 - SC Widens Ambit ▶ Rights of Persons with Disabilities Bill, 2014 with more Benefits ▶ Transgender Persons (Protection of Rights) Bill 2016
--	---

- ▶ The Scheduled Castes and the Scheduled Tribes (Prevention of Atrocities) Amendment Act

2. Health

- ▶ National Health Mission
- ▶ National Ayush Mission
- ▶ Jan Aushadhi Scheme
- ▶ Mission Indradhanush
- ▶ NFHS-4 survey

3. Education

- ▶ Padhe Bharat Badhe Bharat
- ▶ Mid Day Meal Scheme
- ▶ GIAN (Global Initiative of Academic Networks)
- ▶ SWAYAM (Study Webs of Active - Learning for Young Aspiring Minds)

4. Start-up and Skill Development

- ▶ Start Up India Scheme
- ▶ Stand up India Scheme
- ▶ National Student Start-up Policy
- ▶ National Skill Development Mission
- ▶ Pradhan Mantri Kaushal Vikas Yojana
- ▶ DeenDayal Antyodaya Yojana
- ▶ Skill Development Initiative Scheme
- ▶ Self-Employment & Talent Utilisation (SETU)
- ▶ Atal Innovation Mission

5. Vulnerable Sector

- ▶ Social Security
- ▶ Atal Pension Yojana
- ▶ Pradhan Mantri Jeevan Jyoti Bima Yojana
- ▶ Pradhan Mantri Suraksha Bima Yojana
- ▶ Nai Roshni Scheme
- ▶ USTAAD Scheme (Upgrading the Skills and Training in Traditional Arts/Crafts for Development)
- ▶ Nai Manzil Scheme
- ▶ Women and Child Development
- ▶ Beti Bachao Beti Padhao
- ▶ Sukanya Samridhi Yojana
- ▶ Digital Gudda Guddi Board
- ▶ Ujjawala Scheme
- ▶ Janani Suraksha Yojana
- ▶ Janani Shishu Suraksha Karyakram
- ▶ SC/ST
- ▶ Vanbandhu Kalyan Yojana
- ▶ Pradhan Mantri Adarsh Gram Yojana
- ▶ Disability
- ▶ Accessible India Campaign (Sugamya Bharat Abhiyan)

6. Rural and Urban Development

- ▶ Sansad Adarsh Gram Yojana
- ▶ Gram Uday Se Bharat Uday Abhiyan

- ▶ Shyama Prasad Mukharjee Rurban Mission
- ▶ Deendayal Upadhyaya Gram Jyoti Yojana
- ▶ Pradhan Mantri Gram Sadak Yojana
- ▶ Swachh Bharat Abhiyan
- ▶ Pradhan Mantri Awas Yojana- Gramin
- ▶ Pradhan Mantri Awas Yojana - Urban
- ▶ Housing for all by 2022
- ▶ Smart Cities Mission
- ▶ Hriday - National Heritage City Development and Augmentation Yojana
- ▶ Amrut (Atal Mission for Rejuvenation and Urban Transformation)

7. Inclusive growth

- ▶ Measurement criteria
- ▶ Government initiatives for inclusive growth
- ▶ Basic Amenities: Housing/Drinking Waters/ Sanitations
- ▶ Sustainable Development

8. Rural Development

- ▶ Rural development and poverty alleviation
- ▶ Review of the Existing Programmes
- ▶ Development Administration
- ▶ Panchayati Raj
- ▶ Agriculture and Rural Development

9. Miscellaneous schemes

- ▶ Digilocker
- ▶ Bharatnet Project (National Optical Fibre Network)
- ▶ INSPIRE (Innovation in Science Pursuit for Inspired Research)
- ▶ SAKAAR
- ▶ Digital India
- ▶ Namami Gange Project (Integrated Ganga Conservation Mission Project)
- ▶ Ganga Gram Yojana
- ▶ Khelo India
- ▶ PRAGATI (Pro-Active Governance and Timely Implementation)
- ▶ Indian Community Welfare Fund (ICWF)

Governance + Reforms + Bills + Policies

10. Elections in India

- ▶ Salient features of the Representation of People Act, 1950
- ▶ Salient features of Representation of Peoples Act, 1951
- ▶ Electoral reforms

- ▶ Criminalization of politics
- ▶ Negative or neutral voting
- ▶ State funding of Elections
- ▶ Irregularities in polling

11. Political Parties in India

- ▶ Political parties in India
- ▶ Party reforms
- ▶ Problems in the working of parties
- ▶ Casteism and politic
- ▶ Reforms in Party system in India
- ▶ Strengthening of Anti-defection measures

12. Governing Institutions in India

- Structure of Ministries/departments
- Political head
- Secretariat organization secretary
 - Functions of the secretariat
 - Functions of attached and subordinate office
 - Other organizations
- Constitutional bodies
- Statutory bodies
- Autonomous bodies
- Public sector undertakings

- The Executive organization
- ▶ Advantages of the separation of secretariat and executive organization.
- ▶ Strengths and weaknesses of the existing structure
- ▶ Recommendations for improving the Organizational structure

13. Role of Pressure Groups

- ▶ Types of pressure groups
- ▶ Role of pressure group in developing countries
- ▶ Functions of pressure groups in India
- ▶ Pressure groups methods
- ▶ Pressure groups and Democracy
- ▶ Criticism of pressure groups

14. Role of SHG, NGOs, Civil Society

- ▶ SHGs
 - Characteristics
 - Role of SHGs in development
- ▶ NGOs
 - Functions
 - Role of NGOs in development
- ▶ Micro Finance Institutions
 - Salient features
 - Role of MFIs in development



INSPIRE
IAS ACADEMY

The road to your dreams...

ECONOMY

Basic Concepts of National Income, Money Banking, and Other Provisions + Financial Market

1. Basic concepts in Economy

- ▶ Basic concepts of Macroeconomics
- ▶ Economy Sectors
- ▶ Classification of Economy
- ▶ Basic Characteristics of Indian Economy

2. National Income

- ▶ Concepts of National Income
- ▶ Calculation of National Income
- ▶ Latest India's National Income Estimates
- ▶ New Series of National Statistics (Base Year 2011-12)
- ▶ Annual Estimates of Expenditures on GDP
- ▶ Per Capita Income
- ▶ Purchasing Power Parity
- ▶ Lorenz Curve, Philip's Curve
- ▶ Gini Coefficient

3. Money

- ▶ Indian currency system
- ▶ Broad and Narrow Money
- ▶ Money multiplier
- ▶ Digital Money
- ▶ New Monetary Aggregates
- ▶ Monetary Policy
- ▶ Monetary Policy Committee

4. Inflation

- ▶ Types of Inflation
- ▶ Other variants of inflation
- ▶ Effects of inflation
- ▶ Measures taken by RBI
- ▶ RBI and Government Monetary Policy Committee

5. Banking

- ▶ Development of Banking System in India
- ▶ Reserve Bank of India (RBI)
- ▶ Public Sector Banks
- ▶ Other Important Banks and Financial Institutions
- ▶ Cash Reserve Ratio (CRR)
- ▶ Statutory Liquidity Ratio (SLR)
- ▶ Repo Rate
- ▶ Reserve Repo Rate
- ▶ Call Rates
- ▶ Marginal Standing Facility (MSF)
- ▶ Bank Rate

- ▶ Banking Sector Reforms in India
- ▶ Payment banks
- ▶ Small Banks
- ▶ New banking licence
- ▶ White Label ATM
- ▶ Unified Payments Interface
- ▶ Bank Board Bureau
- ▶ Marginal Cost of Funds Based Lending Rate (MCLR)
- ▶ Priority Sector Lending Certificates
- ▶ Concept of Micro ATM

6. Important committees

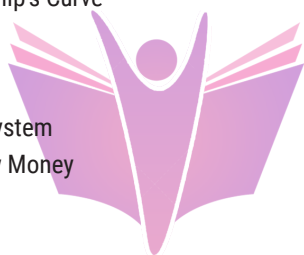
- ▶ Ratan P Watal Committee on Digital Payment
- ▶ Committee for Market Infrastructure Institution (MII)
- ▶ D. P. J. Nayak Committee
- ▶ Deepak Mohanty Committee Report on Medium-term Path on Financial Inclusion
- ▶ Narasimham Committee Report on Banking Sector Reforms
- ▶ Uday Kotak committee on Corporate Governance
- ▶ Nachiket Mor Committee

7. Indian Financial Market

- ▶ Concept and functions of financial markets
- ▶ Importance of money market
- ▶ Types of capital market
- ▶ Distinguish between capital market and money market
- ▶ Nature and functions of a stock exchange
- ▶ Advantages of stock exchanges
- ▶ Limitations of stock exchanges
- ▶ The stock exchanges in India
- ▶ Role of SEBI, IRDA
- ▶ Insurance Industry - Insurance Industry and Reforms
- ▶ Financial Regulators – SEBI, IRDA

8. Recent developments in Economic Sector

- ▶ Government to recapitalize the PSB's over the next 2 years
- ▶ New RBI rule and regulation for peer to peer (P2P) lending
- ▶ Domestic Systemically Important Banks (SIBs) of India
- ▶ Financial Inclusion in India
- ▶ The Concept of Bad Bank



INSPIRE
IAS ACADEMY
The road to your dreams...

- ▶ Alternative Mechanism Panel for PSB consolidation
- ▶ Employee Provident Fund of India
- ▶ Enforcement Department In RBI
- ▶ Gold Monetization Scheme (GMS)
- ▶ Indian Post Payment Bank (IPPB)
- ▶ Indian Gold Coins/Gold Bullion Scheme

9. AGRICULTURE

- ▶ New Agri Project - "Green Ag "
- ▶ Operation Green
- ▶ Agri-Market Infrastructure Fund
- ▶ Kisan credit card
- ▶ Krishi Kalyan Abhiyan
- ▶ Kisan Kalyan Pradhikaran
- ▶ Agriculture Price Policy (APP) in India
- ▶ Pradhan Mantri Annadata Aay Sanrakshan Abhiyan (PM-AASHA)
- ▶ Bhavantar Bhugtan Yojana
- ▶ Foodgrain Production to touch a New Record of 284 83 Million Tonnes in 2017-18
- ▶ Sugar Production
- ▶ Maharashtra Adopt Food Park Model
- ▶ Gujarat's first Mega Food Park inaugurated in Surat
- ▶ Three Year Action Plan of Agricultural Education

10. INDUSTRY

- ▶ Department for Promotion of Industry and Internal Trade
- ▶ National Mission on Government e-Market (GeM) portal
- ▶ Integrated Scheme for Development of Silk Industry" for sericulture
- ▶ North East Industrial Development Scheme (NEIDS)
- ▶ Government Redefines MSME
- ▶ Udyam Sangam-2018 inauguration
- ▶ 'One District One Product' Summit inaugurated
- ▶ Pharma Promotion Tax Exempt: Tribunal
- ▶ Cabinet Identified Champion Services Sectors
- ▶ Purchasing Managers' Index (PMI)
- ▶ Department of Commerce Developing National Logistics Portal
- ▶ National Entrepreneurship Awards 2018
- ▶ Incredible India Tourist Facilitator Certification

11. INFRASTRUCTURE

- ▶ Western Dedicated Freight Corridor (WDFC)
- ▶ First Freight Village

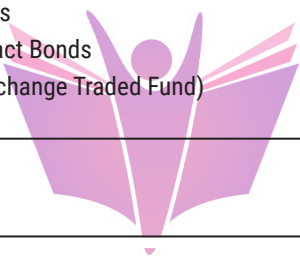
- ▶ Bidder Information Management Systems (BIMS)
- ▶ Bhoomi Rashi - PFMS linkage
- ▶ National E-Mobility Programme
- ▶ Draft National Automotive Policy
- ▶ Advanced Motor Fuels Technology Collaboration Programme
- ▶ Railways CONCOR begins coastal operations
- ▶ Air Sewa - 2 0
- ▶ Airports Privatization
- ▶ Drone regulations developed by Ministry of Civil Aviation
- ▶ Water Aerodrome
- ▶ NABH (Nextgen Airports for Bharat) Nirman Initiative
- ▶ Bansagar Canal Project
- ▶ Jal Marg Vikas Project
- ▶ National Waterways projects in North Eastern Region (NER)
- ▶ Declaration of irrigation projects as National Projects
- ▶ Portal launched for real-time information on National Waterways
- ▶ Revised PPP Port Concessions
- ▶ Solar Charkha Mission
- ▶ Patratu Super Thermal Power Plant
- ▶ National Energy Storage Mission
- ▶ Kudankulam Nuclear Power Plant (KNPP)
- ▶ Srinagar - Alusteng - Drass - Kargil - Leh Transmission System
- ▶ Development of renewable energy
- ▶ Additional Strategic Petroleum Reserves established
- ▶ TRAI Interconnect Rule
- ▶ The TRAI launches integration & availability of TRAI Mobile Apps on UMANG platform
- ▶ Cabinet Approves Easing of Spectrum Cap
- ▶ Strategic Investment Fund under NIIF
- ▶ O-SMART scheme

12. BANKING & FINANCIAL SECTOR

- ▶ Central Board of RBI
- ▶ Monetary Policy: A Fine Balance between Growth and Inflation
- ▶ RBI to link interest rates to external benchmarks replacing MCLR
- ▶ India Post Payments Bank (IPPB)
- ▶ Banks Board Bureau
- ▶ New RBI Norms Related to NPAs
- ▶ Parliament's Estimates Committee report on NPA's
- ▶ Prompt corrective action framework of RBI
- ▶ Mehta panel 5-point plan to fight NPAs

- ▶ Project Sashakt
- ▶ Inter-Creditor Agreement (ICA)
- ▶ Recapitalization of RRBS
- ▶ Pariwarta' scheme for power sector revival
- ▶ Companies Act Notified
- ▶ The arbitration and conciliation (amendment) bill, 2018
- ▶ Fugitive Economic Offenders Bill, 2018
- ▶ Name and Shame Wilful Defaulters
- ▶ National Financial Reporting Authority
- ▶ Public credit registry
- ▶ Currency in Circulation Improved
- ▶ Micro ATM
- ▶ NPCI launched UPI 2.0
- ▶ RBI allows Tokenization of Card Transactions
- ▶ Nilekani Panel on Strengthening the Digital Payments Ecosystem
- ▶ The Society for Worldwide Interbank Financial Tele-communication (SWIFT)
- ▶ Independent regulator for the payments industry
- ▶ Treasury Bill
- ▶ Participatory Notes
- ▶ Development Impact Bonds
- ▶ Bharat 22 ETF (Exchange Traded Fund)

- ▶ Total Expense Ratio
- ▶ World's First Block-chain Bond
- ▶ Share Repurchase
- ▶ Currency Derivative Trade Limit
- ▶ RBI eases hedging norms for overseas borrowings
- ▶ Commercial papers as a source of funds
- ▶ TReDS platform
- ▶ Merger of three public sector insurance firms
- ▶ Steering committee on fintech related issues
- ▶ RBI buys gold for first time in nearly a decade
- ▶ RBI Surplus transfer to Government
- ▶ RBI Launches Ombudsman scheme for NBFCs
- ▶ Government Owned Non-Banking Financial Corporations (NBFCs)
- ▶ Khan Committee recommendation on FPI
- ▶ Graded Surveillance Measure
- ▶ Pension Fund Regulatory and Development Authority
- ▶ Board of Management for Cooperative Banks
- ▶ Deposit Insurance and Credit Guarantee Corporation
- ▶ Reasons for fall of Rupee



INSPIRE
IAS ACADEMY

The road to your dreams...

Budgeting + Fiscal & Monetary Policy + External Sector + International Institutions

1. Government Budgeting/Deficits

- ▶ Budget
 - Plan and Non Plan Expenditure
 - Revenue, Non revenue
 - Receipts, Revenue Receipts, Tax Revenue Receipts, Non-Tax Revenue Receipts
 - Revenue Expenditure
 - Revenue Deficit, Fiscal Deficit, Primary Deficit
 - Deficit and Surplus Budget
- ▶ Deficit Financing

2. Fiscal Policy - Revenue

- ▶ Tax Structure in India
- ▶ Tax – Direct Tax, Indirect Tax
- ▶ Methods of Taxation – Progressive, Regressive, Proportional
- ▶ Value Added Tax – VAT in India
- ▶ Goods and Services Tax – GST, GST Council

- ▶ Service Tax
- ▶ DTC – Direct Tax Code

3. Subsidies

- ▶ Food
- ▶ Fuel
- ▶ Fertilizers

4. Planning

- ▶ Objectives – Major Objective of Planning
- ▶ Planning History
 - Regional and National Planning
 - Imperative and Indicative Planning
 - Visvesvaraya Plan, Gandhian Plan, FICCI Proposal, Congress Plan, Bombay Plan
 - Planning Commission and National Development Council (NDC)
 - Central Planning – 5 Year Plans, 20 Point

<p>Program, MPLADS</p> <ul style="list-style-type: none"> ◦ Decentralizes Planning ◦ Analysis of 5 Year Plans ◦ 12th FYP –Targets – Economic Growth, Poverty and Unemployment, Education, Health, Infrastructure, Environment and Sustainability, Service Delivery ◦ NITI Aayog and its work <p>5. Investment Models</p> <ul style="list-style-type: none"> ▶ Measures of Investment ▶ Capital and investment ▶ Factors affecting investment ▶ Classification of Investment <ul style="list-style-type: none"> ◦ FDI ◦ Angel Investors and Start-ups ◦ M&A ▶ Investment Models ▶ Role of State ▶ PPP (Public-Private Partnership) ▶ Savings and Investment Trends ▶ National Investment Fund (NIF) ▶ Unit Trust of India ▶ Global Depository Receipts/Foreign Currency Convertible Bonds ▶ Portfolio Investment from Foreign Institutional Investors ▶ Non-Resident Indian Investments ▶ Mutual Funds ▶ Pension Reforms ▶ Main Features and Architecture of the New Pension System <p>6. Schemes related to Finance</p> <ul style="list-style-type: none"> ▶ Make In India ▶ Pradhan Mantri Garib Kalyan Yojana ▶ Digi-DhanVyapar/ Lucky Grahak Yojana ▶ Pandit Deendayal Upadhyay Shramev Jayate Karyakram ▶ Pradhan Mantri Jan Dhan Yojana ▶ Pradhan Mantri Mudra Yojana <p>7. External Sector</p> <ul style="list-style-type: none"> ▶ Fixed Foreign Currency Market ▶ Float Foreign Currency Market ▶ Balance Of Payments <ul style="list-style-type: none"> ◦ Current Account ◦ Capital Account ▶ Foreign Portfolio Investment <ul style="list-style-type: none"> ◦ FII 	<ul style="list-style-type: none"> ◦ FDI <ul style="list-style-type: none"> ▶ Exchange Market <ul style="list-style-type: none"> ◦ LERMS ◦ NEER ◦ REER ◦ EFF ◦ Purchasing Power ▶ Depreciation ▶ Appreciation ▶ Hard currency ▶ Soft currency ▶ Cheap currency ▶ Dear currency ▶ SEZ ▶ Convertibility of Currency ▶ India's Forex Reserves ▶ GAAR ▶ Foreign Trade Policy <p>8. International Organizations</p> <ul style="list-style-type: none"> ▶ United Nations ▶ Food and Agriculture Organization (FAO) ▶ International Civil Aviation Organization (ICAO) ▶ International Fund for Agricultural Development (IFAD) ▶ International Labour Organization (ILO) ▶ International Maritime Organization (IMO) ▶ International Monetary Fund (IMF) ▶ International Telecommunication Union (ITU) ▶ United Nations Educational, Scientific and Cultural Organization (UNESCO) ▶ United Nations Industrial Development Organization (UNIDO) ▶ Universal Postal Union (UPU) ▶ World Bank Group (WBG) ▶ International Bank for Reconstruction and Development (IBRD) ▶ International Finance Corporation (IFC) ▶ International Development Association (IDA) ▶ World Health Organization (WHO) ▶ World Intellectual Property Organization (WIPO) ▶ World Meteorological Organization (WMO) ▶ World Tourism Organization (UNWTO) ▶ World Trade Organization (WTO) ▶ Asian Development Bank ▶ Asian Infrastructure Investment Bank (AIIB) ▶ New Development Bank ▶ African Development Bank
--	---

9. Trade agreements

- ▶ RCEP
- ▶ TPP
- ▶ NAFTA
- ▶ MERCOSUR
- ▶ Southern African Development Community (SADC)
- ▶ ASEAN
- ▶ SAFTA

10. Recent developments

- ▶ GST Suvidha Portal
- ▶ GST Regime and its challenges
- ▶ National Anti-Profitteering Authority
- ▶ Capital Gains Tax Rules
- ▶ Financial Resolution and Deposit Insurance Bill 2017
- ▶ RBI recently released its biannual financial stability report (FSR)
- ▶ Panel to draft new direct tax laws to replace the existing income tax Act, 1961
- ▶ Budgetary Reforms in 2017-18
- ▶ Gender Budgeting in India
- ▶ Public Financial Management System (PFMS)
- ▶ Public Debt Management Cell (PDMC)
- ▶ Monetary Policy Committee
- ▶ Insolvency and Bankruptcy Board of India
- ▶ Corporate Bond Market
- ▶ Commercial Arbitration Centre
- ▶ Financial Data Management Centre (FDMC)
- ▶ Payment Regulatory Board
- ▶ Credit Enhancement Guarantee Fund
- ▶ Algorithmic Trading
- ▶ Green Bonds, Blue Bonds
- ▶ Taxation , Tax Terrorism
- ▶ Direct Tax Resolution Scheme 2016
- ▶ Income Declaration Scheme, 2016
- ▶ Double Tax Avoidance Agreement
- ▶ Angel Tax Long term capital gains tax
- ▶ Tax Buoyancy Concept
- ▶ Inverted Duty Structure
- ▶ Sunset Clause and its Significance in Policies
- ▶ Nineteenth Meeting of the Financial Stability and Development Council (FSDC)

- ▶ Goods and services tax appellate tribunal
- ▶ Cabinet approves increasing of Government ownership in Goods and Services Tax Network
- ▶ Input Tax Credit
- ▶ E-way bill
- ▶ Abolition of institution of income tax Ombudsman and indirect tax ombudsman
- ▶ Status paper on debt management
- ▶ Finance Bill
- ▶ CBDT's new scheme on speedier disposal of tax appeals
- ▶ CBDT has released Direct Tax Statistics
- ▶ Liberalized Remittance Scheme
- ▶ PPF Account Close: Government may Allow Premature Closure

11. Recent developments in External Sector

- ▶ Generalised System Of Preferences
- ▶ Taiwan takes India to WTO's safeguard committee on solar duty
- ▶ India withdrew most favoured nation status to Pakistan
- ▶ 7th RCEP inter-sessional ministerial meeting
- ▶ Current Account Deficit
- ▶ Foreign Institutional Investor (FII)
- ▶ Foreign direct investment (FDI)
- ▶ New FDI guidelines for the e-commerce
- ▶ INSTEX – Instrument in Support of Trade Exchanges
- ▶ World Custom Organization
- ▶ Export Credit Guarantee Corporation of India
- ▶ India could be removed from US currency monitoring list
- ▶ Framework on Currency Swap Arrangement for SAARC Member Countries
- ▶ High Level Advisory Group Constituted for Trade
- ▶ Cabotage Law
- ▶ Commerce & Industry Minister launches Mobile App Niryat Mitra
- ▶ 80:20 Scheme on Gold
- ▶ Changes in Foreign Contribution Regulation Act (FCRA)

ENVIRONMENT

Basic Concepts

1. Ecology

- ▶ Types of Ecology
- ▶ Ecological Hierarchy
- ▶ Scope of Ecology
- ▶ Habitat & Ecological Niche
- ▶ Deep vs Shallow Ecology
- ▶ Ecological Principles
- ▶ Ecological Community
 - Structure and Characteristics of a Community
 - Stratification
 - Ecotones
 - Ecological Dominance
 - Seasonal and Diurnal Fluctuation
 - Periodicity
 - Turnover
 - Interdependence
- ▶ Ecological Succession
 - Types and Process of Succession
 - Climax Community
- ▶ Range of Tolerance , Maximum Range
- ▶ Difference between Ecology, Environment and Ecosystem

2. Ecosystem and its dynamics

- ▶ Ecosystem Definitions
- ▶ Functions and Properties of Ecosystem
- ▶ The Structure/Components of Ecosystem
 - Abiotic Components
 - Biotic Components
- ▶ Ecosystem Dynamics
 - Flow of Energy in Ecosystem
 - Trophic Levels
 - Food Chain
 - Types & Significance of Food Chain
 - Food Web
 - Models for Energy Flow
 - Ecological Productivity
 - Ecological Pyramid
- ▶ Biomagnifications
- ▶ Biological Control
- ▶ Organic Farming

3. Biogeochemical Cycles

- Parts of a Bio Geochemical Cycle

- ▶ Types of Biogeochemical Cycle
 - Carbon Cycle
 - Nitrogen Cycle
 - Phosphorus Cycle
 - Sulphur Cycle

4. Biomes: Forest, Grassland, Mountain, and Desert Ecosystems

- ▶ Biome
- ▶ Grasslands
- ▶ Tundra
- ▶ Deserts
- ▶ Thar desert
- ▶ Mountain biome

5. Aquatic Life Zones: Ocean, Rivers, Lakes, and Wetlands

- ▶ Aquatic ecosystems
- ▶ Basic facts about the ocean
- ▶ Importance of the ocean
- ▶ Zones of the ocean
 - Marine life
- ▶ Coral reefs
 - ▶ Coral reefs in India
 - ▶ Conserving coral reefs
 - ▶ Mangroves
 - ▶ Mangroves in India
 - ▶ Freshwater in India
 - ▶ Importance of lakes
 - ▶ National Lake Conservation Plan
 - ▶ Wetlands and their importance
 - ▶ Ramsar Convention
 - ▶ Ramsar Sites
 - ▶ Montreux Record
 - ▶ Extent and distribution of wetlands in India
 - ▶ Conserving the wetlands of India

6. Biodiversity Basics

- ▶ Biodiversity
- ▶ Important kinds of biodiversity
- ▶ Degree of diversity in an ecosystem
 - Endemic species
- ▶ Keystone species
- ▶ Indicator species
- ▶ Invasive species
- ▶ Allopatric and sympatric speciation

- ▶ Bioinformatics
- ▶ Biodiversity distribution
- ▶ Uses and values of biodiversity
- ▶ State of global biodiversity
- ▶ Threats to biodiversity
- ▶ Biodiversity Hotspots
- ▶ Eco-regions
- ▶ Role of traditional knowledge in biodiversity
- ▶ Biopiracy
- ▶ Extinction of species
- ▶ Mass extinction
- ▶ IUCN's classification scheme
- ▶ IUCN Red-List of Threatened Species
- ▶ Level of biodiversity in India
- ▶ Biogeographic classification of India

7. Biodiversity Conservation

- ▶ Ex-situ and in-situ conservation
- ▶ Seed banks
- ▶ Zoos in biodiversity conservation
- ▶ Botanical gardens
- ▶ Protected areas
- ▶ State of protected areas in the world

- ▶ UNESCO Man and the Biosphere Program (MAB)
- ▶ Characteristics of biosphere reserves
 - International agreements for biodiversity conservation
- ▶ Convention on Biological Diversity
- ▶ Cartagena Protocol
- ▶ Nagoya Protocol
- ▶ Aichi Biodiversity Targets
 - Important Coastal and Marine Biodiversity Areas of India
- ▶ Important Bird Areas (IBAs) of India
- ▶ Global Tiger Initiative
- ▶ Project Tiger
- ▶ Project Elephant
- ▶ Indian Rhino Vision
- ▶ Recovery Programme for Critically Endangered Species
 - Use of indigenous knowledge for conserving biodiversity
 - Seed village



INSPIRE
IAS ACADEMY
The road to your dreams...

Natural Resource Degradation and Management + Environmental Governance + Climate Change

1. Effect of Human Activities on Environment

- ▶ Effect of Modern Agriculture on Environment
- ▶ Effect of Housing on Environment
- ▶ Effect of Power Generation on Environment
- ▶ Effect of River Valley Projects (Water Resource Projects) on Environment
- ▶ Effect of Mining on Environment
- ▶ Effect of Transportation Activities on Environment
- ▶ Effect of Tourism on Environment

2. Water Resource degradation

- ▶ Water Cycle (Hydrological Cycle)
- ▶ Availability and Quality Aspects (groundwater depletion)
- ▶ Water-borne and Water-induced Diseases
- ▶ Fluoride Problem in Drinking Water
- ▶ Arsenic Problem in Drinking Water

3. Minerals & Environmental Degradation

- ▶ Mining and Environment
- ▶ Sensitivity of Select Ecosystems to Mining
- ▶ Impact of Mining
- ▶ Indirect Impact of Mining
- ▶ International Laws on Mining
- ▶ Main Act or Statue to regulate the impact of Indian Mining Sector
- ▶ Sustainable Mining

4. Deforestation

- ▶ Causes of Deforestation
- ▶ Implications of Deforestation for Climate Change
- ▶ Consequences of Deforestation on the Wildlife of India
- ▶ Impact of Deforestation on Indian Monsoon
- ▶ Impact of Deforestation on People

- ▶ Deforestation Leads to Water and Soil Resources Loss and Flooding
- ▶ Economical Impacts
- ▶ Strategies for Reducing Deforestation
- ▶ Government Programmes for Conservation of Forests
- ▶ Legislations for Conservation of Forests using People Participation
- ▶ Steps for Improving People Participation in Forest Resource Management
- ▶ Use of Local Traditional Methods

5. Waste Management

- ▶ Solid Waste
- ▶ Hazardous Waste
- ▶ e-Waste
- ▶ Bio Medical Waste
- ▶ Plastic Waste
- ▶ Methods for Waste Management
- ▶ Effects of Poor Waste Disposal
- ▶ Landfill

6. Sustainable Development

- ▶ Principles of sustainability
- ▶ Measurement of Sustainability or Sustainable Ethics or Equitable Utilisation of Natural Resource
- ▶ Sustainable Lifestyle (Role of an individual in sustainable, development)
- ▶ Challenges to Sustainable Development
- ▶ International Efforts to Achieve Sustainability

7. Environmental Pollution

- ▶ Air Pollution
 - Sources of Air Pollution
 - Effects of Air Pollution
 - Classification of Air Pollutant
 - Control Measures of Air Pollution
 - Air Pollution Disasters
 - Long Range Transport of Gaseous Air Pollutants
 - National Ambient Air Quality Standards
- ▶ Water Pollution
 - Sources of Water Pollution
 - Types of Water Pollutants
 - Effects of Water Pollution
 - Water Quality Standards
 - Control of Water Pollution
- ▶ Thermal Pollution
 - Sources of Thermal Pollution
 - Effects of Thermal Pollution
 - Control of Thermal Pollution
- ▶ Soil Pollution or Land Degradation

- Sources of Soil Pollution
- Effects of Soil Pollution
- Control Measures
- ▶ Noise Pollution
- ▶ Air-borne Diseases
- ▶ Toxic Substances: Toxicant, Toxicity and Toxicology
- ▶ Factors affecting toxicity
- ▶ Carcinogens

8. Solid Waste Management

- ▶ Sources of Solid Waste
- ▶ Effect of Solid Waste
- ▶ Control Measures of Solid Waste
- ▶ Solid Waste Management Rules
- ▶ Hazardous Waste Management (HWM)

9. Coastal ecosystem management

- ▶ Mangroves
 - Salient features of Mangroves
 - Importance of Mangroves
 - Mangroves in India
 - Mangroves under threats
 - Legal and Regulatory Approaches for Protection
- ▶ Estuaries
 - Importance of estuaries
 - Threats to estuaries
- ▶ Coral Reefs
 - Geographical Conditions Required
 - Uses of coral reefs
 - Conservation of coral reef
- ▶ Steps for Coastal Ecosystem Management

10. Environmental Impact Assessment

- ▶ Government Body which Executes EIA
- ▶ Environmental Effects Analysed under EIA
- ▶ Process of EIA
- ▶ EIA Ruling 1984

11. Environmental Laws

- ▶ Environmental Laws: Provisions in the Indian Constitution towards Environmental Protection
- ▶ Salient Features of Air (Prevention and Control of Pollution) Act, 1981*
- ▶ Salient Features of Water (Prevention and Control of Pollution) Act, 1974
- ▶ Salient features of Forest Conservation Act, 1980
- ▶ Salient Features of Wildlife Protection Act, 1972
- ▶ Salient Features of Environment (Protection) Act, 1986
- ▶ Role of Government in Environmental Protection

12. Environment related Institutions and Organizations

- ▶ Pollution Control Boards
- ▶ National Green Tribunal
- ▶ Forest Survey of India
- ▶ National Board for Wildlife

13. Schemes

- ▶ National Mission for Clean Ganga
- ▶ India Signs Global Environment Facility Grant
- ▶ Wood in Good Campaign
- ▶ Boat Lab to Study Brahmaputra
- ▶ Wildlife Action Plan
- ▶ SECURE Himalayas
- ▶ Strategic Plan for Human-Elephant Conflict
- ▶ Save the Sparrow
- ▶ Land Degradation Neutrality
- ▶ Biodiversity Heritage Site - Ameenpur Lake
- ▶ Energy Conservation Building Code
- ▶ Special Protection Force for Rhinos
- ▶ Regional Project on Stubble Burning
- ▶ Blue Flag Pilot Project
- ▶ National Afforestation Program
- ▶ National River Conservation Plan
- ▶ National Mission for Clean Ganga
- ▶ National Air Quality Index (AQI)
- ▶ National Action Programme to Combat Desertification
- ▶ Bharat Stage Norms

14. International Environmental Governance

- ▶ UNEP
- ▶ UNDP
- ▶ Centre for Biological Diversity
- ▶ WWF for Nature
- ▶ IUCN - Red List
- ▶ Birdlife International
- ▶ International Conventions / Protocols & their Objectives

15. Urbanization and climate

- ▶ Pollution in metros and climate change
- ▶ Real estate boom and environment degradation
- ▶ Urban Heat Island
- ▶ Polythene bags and pollution
- ▶ Methane generation from waste

16. Impact of agriculture on climate

- ▶ Agriculture increases Carbon Dioxide Emissions
- ▶ Monoculture practice impacts biodiversity
- ▶ Pollution due to use of chemical fertilizers
- ▶ Soil-related effects

- ▶ Fertilizer's Effect on the Environment
- ▶ Impact of livestock on environment
- ▶ Impact of use of Pesticides on environment
- ▶ Impact of GM crop on environment
- ▶ Emission of Methane from agricultural practices
- ▶ Sustainable Agriculture Techniques

17. Global Warming & Health

- ▶ Health impacts of global warming
- ▶ Mosquito-borne diseases
- ▶ Ozone depletion and human health

18. Recent developments

▶ ECOLOGY & BIODIVERSITY

- Nilgiri Tahr: Climate change threatening 60% of its habitat
- Wild horses have gone extinct
- Assam to observe 'Rhino Day' on September
- Rise in Rhino Population in Kaziranga National Park
- Freedom Baby: India's first Humboldt penguin dies
- Swelling Salinity Threatens Gangetic Dolphins
- Indus Dolphins (BHULAN)
- Bahuda Rookery: Another Olive Ridley Nesting Site in Odisha
- Global Tiger Recovery Program
- Project Tiger
- Tiger Census 2018
- Asiatic Lion Conservation Project' launched by Government
- Vaccination of Gir lions against deadly canine distemper virus
- Rajasthan's first lion safari inaugurated at Nahargarh Biological Park
- NTCA, Cheetah Reintroduction Project: Nauradehi wildlife sanctuary
- Black Panther
- Monkey Declared Vermin in Himachal Pradesh
- Harrier Birds
- Odisha police launch drive to bust Pangolin smuggling racket
- Uttarakhand HC declares entire animal kingdom as legal entities 'Gaj Yatra'
- Andaman & Nicobar Islands home to tenth of India's fauna species: ZSI
- World's Smallest Land Fern
- Vetiver Grass
- Red sanders
- Removal of rosewood from Appendix II of CITES
- Khangchendzonga Biosphere Reserve was included in the UNESCO's World Network of Biosphere Reserve (WNBR)

<ul style="list-style-type: none"> ◦ Conservation of migratory birds and their habitats ◦ SC directs Centre to declare area around national parks as eco-sensitive ◦ India Faces Grave Danger to Soil Biodiversity: WWF ◦ Floods trigger influx of alien fish species in Kerala ◦ Fire at Bandipur Tiger Reserve ◦ Mammals of India (MaOI) ◦ Mangalajodi ecotourism trust ◦ Sustainable Catchment Forest Management (SCATFORM) launched in Tripura ◦ Floating Treatment Wetland <p>► POLLUTION</p> <ul style="list-style-type: none"> ◦ Nitrogen Emission ◦ Black Carbon in Haryana ◦ Erratic Monsoon Rainfall partly due to Air Pollution ◦ Ban on Petcoke ◦ Only Euro VI compliant vehicles to be sold from April 2020: SC ◦ Air Quality Early Warning System ◦ Dust Mitigation Plan ◦ Bio-Jet Fuel Flight ◦ SATAT Initiative ◦ WAYU – Air Pollution Control Device ◦ Uranium Contamination Of Ground Water In India ◦ Arsenic contamination in paddy plants ◦ Heavy Metal Water Pollution ◦ Persistent Organic Pollutants ◦ Alliance to End Plastic Waste ◦ Taj Declaration to Beat Plastic Pollution adopted in Agra ◦ Approval for the Trishna Gas project of ONGC which falls in the Trishna Wildlife Sanctuary ◦ Thoothukudi Sterlite Plant ◦ Achieving Energy Efficiency Key to Meeting Lower Emissions Commitment ◦ Akademik Lomonosov: World's First Floating Nuclear Power Plant becomes operational <p>► CLIMATE CHANGE</p> <ul style="list-style-type: none"> ◦ Earth at risk of becoming irreversible hothouse: Study carbon source ◦ Urban Waste and Global Warming ◦ The State of the Global Climate in 2018 ◦ El Nino and Climate Change: 2019 may be the hottest year yet ◦ Sea Level Rise and its Impact ◦ "Green Good Deeds" Campaign ◦ Adapting Better to Climate Change Mitigation Plan 	<ul style="list-style-type: none"> ◦ India Spearheading Climate solutions ◦ Stratospheric barrier to curb warming ◦ Recovery of Ozone Layer ◦ Atmosphere & Climate Research-Modelling Observing Systems & Services (ACROSS) ◦ World Bank's climate action investment for 2021- 25 ◦ UNEP partners with Google for monitoring impact of human activity on global ecosystem <p>► CONFERENCES AND REPORTS</p> <ul style="list-style-type: none"> ◦ IPCC Special Report on Climate Change ◦ COP24 IN KATOWICE: Major Outcomes ◦ India to submit Second Biennial Report to UNFCCC ◦ BASIC Ministerial Meeting on Climate Change ◦ Global Cooling Innovation Summit held in New Delhi ◦ Sustainable Biofuel Innovation Challenge (SBIC) ◦ Suva Expert Dialogue on Loss and Damage ◦ India State of Forest Report 2017 ◦ Parliamentary Panel Report on Western Ghats ◦ 13th CoP of Bonn Convention ◦ 2018 State Of The World's Birds Report ◦ Water Bird survey <p>► STAPCOR – 2018</p> <ul style="list-style-type: none"> ◦ India to Bring its First Own National Environment Survey (NES) in 2019 ◦ Environment Performance Index (EPI) 2018 ◦ Environmental Impact Assessment (EIA) ◦ Asia Environment Enforcement Awards, 2018 ◦ Environmental Refugee ◦ World Water Development Report 2018 ◦ Status of Trace and Toxic metals in Indian rivers 2018 Report ◦ International Dam Safety Conference 2019 ◦ Hindu Kush Himalayan Assessment Report ◦ India's E-waste Generation ◦ Eighth Regional 3R Forum ◦ Global Energy Transformation: A Roadmap to 2050 ◦ India pitches for declaring 2019 as International Year of Millets <p>► POLICIES, SCHEMES & INITIATIVES</p> <ul style="list-style-type: none"> ◦ States set to roll out Parivesh ◦ Draft National Forest Policy, 2018 ◦ NITI Aayog Calls for Clear Policy on Shifting Cultivation ◦ Draft Rules for Compensatory Afforestation Act, 2016 <p>► CAMPA</p> <ul style="list-style-type: none"> ◦ Ganga Vriksharopan Abhiyan ◦ 'i-Hariyali' app' to increase state's green cover
---	---

- Scheme for protection of exotic Neela Kurinji plants
- Scheme to Promote In-Situ (In The Farm Itself) Management Of Crop Residue
- Task Force on Biomass Management
- National Clean Air Programme
- Clean Air' India Ring Initiative
- Ash track mobile application
- South Asian Nitrogen Hub
- Scheme for Biomass Based Cogeneration Projects
- National Policy on Biofuels-2018
- Waste to Wealth
- National REDD+ Strategy
- Ensemble Prediction Systems (EPS): IMD's new forecast model
- Solar Geo-Engineering (Solar Radiation Management (SRM)
- Maharashtra's Project on Climate Change Resilient Agriculture (PoCRA)
- Initiatives to reduce carbon emissions from Farming
- National Water Informatics Centre (NWIC)
- Ganga Gram Project
- Deep Ocean Mission
- Clean Seas Campaign
- Blue Flag certification
- 3d-Printed Artificial Reef
- Bhutan, Nepal and Bangladesh to be part in India Tiger Census
- African countries launch joint initiative to save 4 carnivore species
- ICFRE inks two MuUs to launch Prakriti programme
- Himalayan Research Fellowships scheme
- One Planet One City Challenge Of WWF
- Smart Food Executive Council

► **RESOURCE CONSERVATION & MANAGEMENT**

- 2018 Earth Overshoot Day to fall on August 1
- National Biogas and Manure Management Programme

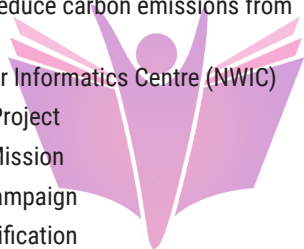
- Community Forest Resource
- Brazzaville Declaration
- Nekkampur Lake (Tulsi and Ashwagandha)
- NITI Aayog Urges Plan to Save Springs in Himalayas
- Bhungroo Water Harvesting System
- Google for Water Resource Management
- Water Scarce Cities & Composite Water Management Index (CWMI)
- South Asia Wildlife Enforcement Network (SAWEN)
- The National Wildlife Genetic Resource Bank
- Conservation Assured | Tiger Standards (CA|TS) Partnership
- Recovery Programme For Wildlife Species
- New Wildlife Sanctuary at Ghodazari
- Kaziranga National Park
- Organic Carbon for Carbon Sequestration
- Zero Budget Natural Farming
- State Energy Efficiency Preparedness Index 2018
- Solar City Programme

► **DISASTER MANAGEMENT**

- Disaster Resilient Infrastructure in India (Policies and Guidelines)
- National Disaster Response Force
- National Disaster Risk Index
- Regional Integrated Multi-Hazard Early Warning System(RIMES) for Asia and Africa
- Fire Disaster Management
- Landslide Warning System
- Indian Tsunami Early Warning System

► **MISCELLANEOUS**

- Smartphone Tech Most Damaging to Environment
- Prevention of cruelty to animals (Karnataka Amendment) Bill
- Sagar Nidhi
- International Whaling Commission



INSPIRE
IAS ACADEMY
 The road to your dreams...

1. Visual Art

- ▶ Sculptures of Harappan Civilisation
- ▶ Sculptures of Mauryan Age
- ▶ Post-Mauryan Period
- ▶ Jain Sculptures
- ▶ Buddhist Sculpture
- ▶ Gupta Sculpture
- ▶ Medieval School of Sculpture
- ▶ Modern Indian Sculpture

2. Architecture in Ancient India

- ▶ Harappan Period
- ▶ Mauryan Architecture
- ▶ Post-Mauryan Period
- ▶ Gupta Period
- ▶ Temples of Khajuraho
- ▶ Temples of Odisha
- ▶ Temples of Gwalior
- ▶ Temples of Gujarat
- ▶ Temples of Rajasthan
- ▶ Temples of Bengal
- ▶ Temples of Assam
- ▶ Temples of Himachal Pradesh
- ▶ Temples of Jammu and Kashmir
- ▶ Pallava Period
- ▶ Chola Period
- ▶ Pandya Temples
- ▶ Vijaynagar Period
- ▶ Nayaka Temples
- ▶ Temples of Kerala
- ▶ Vesara Style
- ▶ Hoysala Style
- ▶ Rashtrakuta Period

3. Indo-Islamic Architecture

- ▶ Imperial Style (Delhi Sultanat)
- ▶ Provincial Style
- ▶ Mughal Style
- ▶ Sikh Style of Architecture
- ▶ Rajput Architecture
- ▶ Salient features

4. Modern Architecture

- ▶ European Influence
- ▶ Indo-Saracenic Architecture
- ▶ Post-Independence Period

5. Indian Paintings

- ▶ Tradition of Mural Paintings in India

- ▶ Tradition of Miniature Paintings in India
- ▶ Paintings in the Deccan
- ▶ Rajput School of Painting
- ▶ Pahari School of Painting
- ▶ Miniature Painting in South India
- ▶ Regional Paintings
- ▶ Modern Paintings
- ▶ Contemporary Paintings

6. Pottery Tradition in India

- ▶ Ochre: Coloured Pottery (OCP)
- ▶ Black and Red Ware (BRW)
- ▶ Painted Grey Ware (PGW)
- ▶ Northern Black Polished Ware (NBPW)
- ▶ Glazed and Unglazed Pottery

7. Music in India

- ▶ Main Pillars of Indian Music
- ▶ Forms of Indian Music
- ▶ Musical Instruments
- ▶ Institutions Related to Music

8. Dances in India

- ▶ Concept of Dance in India
- ▶ Concept of AshtaNayika
- ▶ Eight Classical Dance Forms in India
- ▶ Folk Dances
- ▶ Modern Dances

9. Martial Arts in India

- ▶ Genesis of Martial Arts
- ▶ Forms of Traditional Martial Arts

10. Indian Theatre

- ▶ Classical Sanskrit Theatre
- ▶ Regional Theatre
- ▶ Modern Theatre
- ▶ Renaissance of Indian Theatre

11. Indian Puppetry

- ▶ String Puppets
- ▶ Shadow Puppets
- ▶ Rod Puppets
- ▶ Glove puppets
- ▶ Modern Puppetry
- ▶ Tribal Puppetry

12. Indian Cinema

- ▶ Cinema in India
- ▶ History of Indian Cinema
- ▶ Classification of Indian Cinema Film Music of India

13. Religions in India

- ▶ Pre-Vedic Religion
- ▶ Hinduism
- ▶ Buddhism
- ▶ Jainism
- ▶ Sikhism
- ▶ Islam
- ▶ Christianity
- ▶ Zoroastrianism
- ▶ Judaism
- ▶ Philosophy in India

14. Bhakti & Sufi Movements

- ▶ Bhakti Movement
- ▶ Vaishnava Acharyas
- ▶ Other Saints of Bhakti Movement
- ▶ Maharashtra Dharma
- ▶ Sufism

15. Languages & Literature in India

- ▶ Sanskrit Literature
- ▶ Pali Literature
- ▶ Prakrit Literature
- ▶ Tamil Literature
- ▶ Telugu Literature
- ▶ Malayalam Literature
- ▶ Kannada Literature
- ▶ Odia Literature
- ▶ Assamese Literature
- ▶ Bengali Literature
- ▶ Gujarati Literature
- ▶ Rajasthani Literature
- ▶ Punjabi Literature
- ▶ Marathi Literature
- ▶ Hindi Literature
- ▶ Persian Literature
- ▶ Urdu Literature

16. Miscellaneous Topics

- ▶ Linguistic Minorities
- ▶ International Yoga Day
- ▶ Indian Handicrafts
- ▶ 11 years of One Rupee Note
- ▶ Personalities Related to Culture
- ▶ Places of Cultural Interest
- ▶ Cultural Institutions in India

- ▶ Awards and Honours Associated with Culture
- ▶ The Calendar & the Eras
- ▶ Science and Technology in Ancient India
- ▶ UNESCO's List of Cultural Heritage in India
- ▶ Protection and Promotion of Indian Culture and Heritage :Legal Provisions

17. Recent developments

▶ MUSIC, DANCE & DRAMA

- India's First Music Museum
- Classical Music of India
- Kamsale Dance
- Chhau Dance
- Kathak Dance
- Classical Dances of India

▶ ARCHITECTURE & SCULPTURE

- BadshahiAshoorkhana
- Khirki Mosque
- BababudanDargah
- Bagh-e-NayaQila
- Khajuraho Temple
- Konark Sun Temple
- Sri MeenakshiSundareswarar Temple
- Kataraj Dham
- Kartarpur Corridor
- Rani-ki-Vav
- Buddhist site museum at Lalitgiri in Odisha
- Monuments of National Importance
- World Capital of Architecture
- PanjTirath Hindu religious site declared as national heritage

▶ PAINTINGS & OTHER ART FORMS

- Mithila Paintings
- Thanjavur Paintings
- Bagru hand-block printing
- Kalamkari Art
- TholuBommalata
- Dance Panel on Silappathikaram
- Pochampally Sarees

▶ LANGUAGE & LITERATURE

- Walmikiand Malhar: 2 unknown languages discovered
- Classical Sanskrit Literature

▶ RELIGION, PHILOSOPHY & FESTIVALS

- Buddhism
- Vishishtadvaita (Qualified Non-dualism)
- SadharanBrahmoSamaj
- PrayagrajKumbhaMela 2019
- Kuthiyottam Ritual
- Mahamastakabhisheka



INSPIRE
IAS ACADEMY
The road to your dreams...

<ul style="list-style-type: none"> ◦ Dwijing Festival ◦ Nongkrem Dance Festival ◦ Bathukamma Festival ◦ Khajuraho Dance Festival ◦ Chithirai Festival ◦ National Banana Festival ◦ ChardhamYatra ◦ Makaravilakku Festival ◦ Harvest Festivals around India ◦ Pakke Hornbill Fest as 'state festival' ◦ Sangai Tourism Festival ◦ Behdiengkhlam Festival ◦ Cherry Blossom Festival ◦ Hornbill Festival ◦ Ambubachi Mela ▶ INSTITUTIONS & CONFERENCES <ul style="list-style-type: none"> ◦ Sangeet Natak Akademi ◦ Lalit Kala Akademi ◦ Archaeological Survey of India (ASI) ◦ International Buddhist Conference ◦ International conference on Guru Padmasambhava ◦ 11th World Hindi Conference ◦ 17th World Sanskrit Conference ◦ 42nd Session of World Heritage Committee (WHC) ▶ HISTORICAL EVENTS <ul style="list-style-type: none"> ◦ Pietermaritzburg Station Incident ◦ Azad Hind Government 	<ul style="list-style-type: none"> ◦ Battle of Haifa ▶ PERSONALITIES <ul style="list-style-type: none"> ◦ Ramanuja ◦ Sant Kabir ◦ Tansen ◦ Guru Ravidas ◦ Swami Vivekananda ◦ Pingali Venkayya ◦ Sir Chhotu Ram ◦ Sri Satguru Ram Singhji ▶ 9. SCHEMES & INITIATIVES <ul style="list-style-type: none"> ◦ Swadesh Darshan Scheme ◦ Sanskriti Kumbh ◦ Bhasha Sangam Program ◦ Paryatan Parv 2018 ◦ National Mission for Manuscripts (NMM) ◦ PRASAD Scheme ◦ National Culture Fund ▶ 10. MISCELLANEOUS <ul style="list-style-type: none"> ◦ GI tag for Telangana's Adilabaddokra, WarangalDhurries ◦ UNESCO's List of Intangible Cultural Heritage ◦ UNESCO Global Geopark Network Status ◦ World Heritage Day ◦ Kambala
--	--

History: Ancient + Medieval India

<h3>Ancient India</h3> <ol style="list-style-type: none"> 1. Pre Historic Cultures In India <ul style="list-style-type: none"> ▶ Periodization of Indian Pre History ▶ Sources of Pre History ▶ Food Gathering Communities ▶ Food Producing Men ▶ Neolithic or the New Stone Age ▶ Iron Age ▶ Impact of Iron 2. Pastoral and Farming Communities <ul style="list-style-type: none"> ▶ Neolithic Phase 	<ol style="list-style-type: none"> ▶ Chalcolithic Phase ▶ Early Iron Phase ▶ Geographical Distribution and Characteristics 3. Indus Valley Civilization <ul style="list-style-type: none"> ▶ Major cities ▶ Town Planning ▶ Harappan Trade ▶ Agriculture ▶ Domestication of animals ▶ Crafts ▶ Religion ▶ Harappan Pottery
---	--

- ▶ Weights and Measures
- ▶ Script and Language
- ▶ Images
- ▶ Decline of Harappan Culture

4. Vedic Society

- ▶ Original Home of Aryans
- ▶ Features of Aryan Culture
- ▶ Vedic Texts
- ▶ Sources for Reconstructing Vedic Society and Culture
- ▶ Geography of the Rig Vedic Period and geography of the later Vedic Phases
- ▶ Economic Conditions
- ▶ Political Organisation and Evolution of Monarchy
- ▶ Social Organisation and Varna System
- ▶ Religion and Thought

5. Pre Mauryan Period

- ▶ Formation of states
- ▶ The Sixteen Mahajanapadas
- ▶ Republics
- ▶ Rise of urban centres
- ▶ Haryanka dynasty
- ▶ Shishunaga dynasty
- ▶ Nanda dynasty

6. The Mauryan Empire

- ▶ Chandragupta and Bindusara
- ▶ Megasthenes
- ▶ Asoka and His Successors
- ▶ Asoka's Inscriptions and Sites
- ▶ Asoka's Dhamma
- ▶ Mauryan Administration, Economy, Society and Art
- ▶ The Arthashastra

7. Post-Mauryan India (sc 200-AD 300)

- ▶ Society: Evolution of Jatis
- ▶ Sangam Texts and Society
- ▶ Satavahanas and Other Indigenous Dynasties
- ▶ Foreign Dynasties
- ▶ Commercial Contacts with the Outside World
- ▶ Schools of Art

8. Growth of Jainism and Buddhism

- ▶ Jainism
- ▶ Buddhism

9. Imperial Guptas

- ▶ Sources of Gupta Rule
- ▶ Political history of Guptas

- ▶ Fahien
- ▶ Gupta Administration
- ▶ Gupta Culture
- ▶ Urban centres in Gupta period
- ▶ Economic Conditions

10. Harshavardana

- ▶ Sources for Harsha's Period
- ▶ Early life of Harsha
- ▶ Harsha's Administration
- ▶ Important Officials of the empire
- ▶ Economy under Harsha
- ▶ Society
- ▶ Religion

11. The Southern Dynasties

- ▶ The Shatavahanas (230 BC TO AD 225)
- ▶ The Pallavas (AD 330-796)
- ▶ The Chalukyas (AD 535-1190)
- ▶ The Pandyas of Madurai (AD 590-1323)
- ▶ The Chola Dynasty (AD 850-1310)
- ▶ Rashtrakutas (AD 753-973)

Medieval India

1. Central Asian Politics and the Advance of Babur towards India

- ▶ The Timurids
- ▶ The Timurid-Uzbek and Uzbek-Iran Conflict and Babur
- ▶ Babur's Advance towards India.

2. Struggle for Empire in North India (Afghans, Rajputs and Mughals)

- ▶ Struggle between Ibrahim Lodi and Babur
- ▶ the Battle of Panipat
- ▶ Babur's problems after the Battle of Panipat
- ▶ Struggle with RanaSanga
- ▶ Problems of the Eastern Areas and the Afghans
- ▶ Babur's Contribution and Significance of his Advent into India

3. Struggle for Empire in North India

- ▶ Humayun and the Afghans
- ▶ Early Activities of Humayun, and the Tussle with Bahadur Shah
- ▶ The Gujarat Campaign
- ▶ The Bengal Campaign, and Struggle with Sher Khan

4. The Establishment of the North Indian Empire

- ▶ The Surs



INSPIRE
IAS ACADEMY
The road to your dreams...

- ▶ Sher Shah's Early Life
- ▶ Social and Political Background of Bihar and the Rise of Sher Shah to Power.
- ▶ The Sur Empire (1540-56)
- ▶ Contributions of Sher Shah

5. Consolidation and Expansion of the Empire - Akbar

- ▶ Conflict with the Afghans - Hemu
- ▶ Struggle with the Nobility: Bairam Khan's
- ▶ Regency; Revolt of Uzbek Nobles
- ▶ Early Expansion of the Empire (1560-76) - Malwa, Garh-Katanga, Rajasthan, Gujarat, Eastern India
- ▶ Relations with the Rajputs - Growth of a Composite Ruling Class
- ▶ Rebellions, and Further Expansion of the Empire in the North West

6. State and Government under Akbar

- ▶ Akbar's Concept of Suzerainty
- ▶ Structure of Government, Central and Provincial -the Vikalat, the Central Ministries, Provincial
- ▶ Government, District and Local Government
- ▶ The Working of Government - the Ruler, Land-Revenue System, the Dahsala System, the Mansabdari
- ▶ System and the Army

7. Akbar's Religious Views

- ▶ Relations with the Ulama and Social Reforms
- ▶ The Early Phase (1556-73)
- ▶ The Second Phase (1573-80) - the IbadatKhana
- ▶ Debates - the Mahzar - Breach with Orthodox
- ▶ Ulama - Re-organisation of Madadd-i-Maash Grants
- ▶ Third or Final Phase - Din-i-Ilahi - State
- ▶ Policies and religious toleration

8. The Deccan and the Mughals (Upto 1657)

- ▶ The Deccani States upto 1595
- ▶ Mughal Advance towards the Deccan
- ▶ Mughal Conquest of Berar, Khandesh and Parts of Ahmadnagar
- ▶ Rise of Malik Ambar, and Frustration of
- ▶ Mughal Attempt at Consolidation (1601-27)
- ▶ Extinction of Ahmadnagar, Acceptance of Mughal
- ▶ Suzerainty by Bijapur and Golconda
- ▶ Shah Jahan and the Deccan (1636-57)
- ▶ Cultural Contribution of the Deccani States

9. Foreign Policy of the Mughals

- ▶ Akbar and the Uzbeks
- ▶ The Question of Qandahar and Relations with Iran
- ▶ Shah Jahan's Balkh Campaign

- ▶ Mughal - Persian Relations - the Last Phase

10. India in the First Half of the Seventeenth Century

- ▶ Jahangir's Accession - his Early Difficulties
- ▶ Territorial Consolidation and Expansion of the Empire - Mewar, East India and Kangra
- ▶ NurJahan, and the NurJahan 'Junta'
- ▶ The Rebellions of Shah Jahan, and the coup de main of Mahabat Khan
- ▶ Jahangir as a Ruler
- ▶ State and Religion in the First Half of the Seventeenth Century
- ▶ Shah Jahan - Consolidation and Expansion of the Empire
- ▶ Evolution of the Mughal Ruling Class and the Mansabdari System

11. Aurangzeb - Religious Policies, North India and the Rajputs

- ▶ War of Succession
- ▶ Religious Policy : First Phase (1658-79)
- ▶ Reforms and Puritanical Measures, Hindu
- ▶ Temples, Jizyah; Second Phase (1679-1707)
- ▶ Territorial Consolidation and Expansion of Empire - North India
- ▶ Popular Revolts - Jats, Satnamis, Afghans and Sikhs
- ▶ Breach with Marwar and Mewar

12. Climax and Crisis of the Mughal Empire the Marathas and the Deccan

- ▶ Rise of the Marathas - Early Career of Shivaji -
- ▶ Treaty of Purandar - the Agra Visit
- ▶ Shivaji's Swarajya - Administration and Achievements
- ▶ Aurangzeb and the Deccani States (1658-87)
- ▶ Marathas and the Deccan (1687-1707)
- ▶ Assessment of Aurangzeb and the Jagirdari Crisis

13. Society-Structure and Growth

- ▶ Rural Society
- ▶ Towns and Town Life
- ▶ Artisans and Master-Craftsmen
- ▶ Women
- ▶ Servants and Slaves
- ▶ Standard of Living
- ▶ The Ruling Classes - Nobility, Rural Gentry
- ▶ The Middle Strata
- ▶ The Commercial Classes

14. Economic Life-Patterns and Prospects

- ▶ Inland Trade
- ▶ Overseas Trade - Role of Foreign Trading
- ▶ Companies - Position of Indian Merchants Over-

<p>land Trade</p> <ul style="list-style-type: none"> ▶ The Mughal State and Commerce ▶ Trend of India's Economy and Prospects during the First Half of the Eighteenth Century <p>15. Religion, Fine Arts, Science and Technology</p> <ul style="list-style-type: none"> ▶ Religion- Hindu Religion, Sikh Religion, Islam ▶ Fine Arts - Architecture, Painting, Language and Literature, Music ▶ Science and Technology <p>16. Northern India in the First Half of the Eighteenth Century</p> <ul style="list-style-type: none"> ▶ Bahadur Shah I, and the Beginning of the Struggle ▶ For Wizarat - Rajput Affairs - Marathas and the 	<ul style="list-style-type: none"> ▶ Deccan - Accentuation of the Party Struggle ▶ Struggle for 'New' Wizarat: Zulfiqar Khan and Jahandar Shah (1712-13) ▶ The Saiyid Brothers' Struggle for 'New' Wizarat ▶ The Saiyid 'New' Wizarat ▶ The Wizarat of M. Amin Khan and Nizam-ul-Mulk ▶ Rise of Regional States, Beginning of Foreign Invasions of India (1725-48) <p>17. The Maratha Bid for Supremacy</p> <ul style="list-style-type: none"> ▶ The Marathas and their Policy of Expansion ▶ The Marathas and Nizam-ul-Mulk ▶ The Maratha Advance into Gujarat and Malwa ▶ The Maratha Advance into Doab and Punjab: ▶ First Phase (1741-52); Second Phase (1752-61); ▶ Third Battle of Panipat
--	---

History

Modern India

<p>1. The Advent of Europeans In India</p> <ul style="list-style-type: none"> ▶ The Portuguese in India <ul style="list-style-type: none"> ◦ De Almeida ◦ Albuquerque ◦ Causes of failure of Portuguese empire in India ▶ The Dutch in India ▶ The Danes in India ▶ The English ▶ The French ▶ Anglo-French Rivalry <ul style="list-style-type: none"> ◦ First Carnatic War ◦ Rise of the Hyderahad State ◦ The Second Carnatic War ◦ The Third Carnatic War ◦ Causes of English Success <p>2. The English in Bengal from 1757 TO 1772</p> <ul style="list-style-type: none"> ▶ Black-hole Tragedy ▶ Battle of Plassey ▶ Mir Jafar ▶ Deposition of Mir Jafar ▶ Mir Kasim <p>3. Impact of British Administration</p> <ul style="list-style-type: none"> ▶ Industrialization—Ruin of Artisans and Handicrafts men ▶ Impoverishment of Peasantry ▶ Emergence of New Land Relations, Ruin of Old Zamindars ▶ Stagnation and Deterioration of Agriculture 	<p>▶ Commercialization of Indian Agriculture</p> <p>▶ Development of Modern Industry</p> <p>▶ Rise of Indian Bourgeoisie</p> <p>▶ Economic Drain</p> <p>▶ Famine and Poverty</p> <p>▶ Nationalist Critique of Colonial Economy</p> <p>▶ Abolition of the Dual System</p> <p>▶ Zamindari system</p> <p>▶ Ryotwari system</p> <p>▶ Mahalwari system</p> <p>4. The Revolt of 1857</p> <ul style="list-style-type: none"> ▶ Economic Causes ▶ Political Causes ▶ Administrative Causes ▶ Socio -Religious Causes ▶ Influence of Outside Events ▶ Discontent Among Sepoy's ▶ Beginning and Spread ▶ Leaders of the Revolt ▶ Suppression of Revolt ▶ Causes of Failure of Revolt ▶ Hindu-Muslim Unity Factor ▶ Nature of the Revolt ▶ Consequences <p>5. Administrative Changes After 1857</p> <ul style="list-style-type: none"> ▶ Administration - Central, Provincial, Local ▶ Changes in the Army
--	--

- ▶ Public Services
- ▶ Princely States
- ▶ Administrative Policies
- ▶ Foreign Policy

6. Social reforms in India

- ▶ Raja Ram Mohan Roy
- ▶ Swami Vivekananda
- ▶ Swami Dayananda Saraswati
- ▶ Ishwar Chandra Vidyasagar
- ▶ Jyotiba Phule
- ▶ Dr. B. R. Ambedkar
- ▶ Henry Vivian Derozio
- ▶ Debendranath Tagore
- ▶ Keshab Chandra Sen
- ▶ Sri Ramakrishna Paramahansa
- ▶ Mahadev Govind Ranade
- ▶ Theosophical Society And Annie Besant
- ▶ Syed Ahmad Khan
- ▶ Parsi Religious Reform Association
- ▶ Baba Dayal Das
- ▶ Pandita Ramabai
- ▶ Sarojini Naidu

7. Development of Indian Press

- ▶ Early Regulations on Press
- ▶ Struggle by Early Nationalists to Secure Press Freedom
- ▶ Vernacular Press Act, 1878
- ▶ During and After the First World War
- ▶ During the Second World War
- ▶ After Independence

8. Development of Education

- ▶ Charter Act of 1813
- ▶ Orientalist-Anglicism Controversy
- ▶ Efforts of Thomson
- ▶ Wood's Despatch (1854) Hunter Education Commission (1882-83)
- ▶ Indian Universities Act, 1904
- ▶ Government Resolution on Education Policy—1913
- ▶ Saddle University Commission (1917-19)
- ▶ Education Under Dyarchy
- ▶ Hartog Committee (1929)
- ▶ Wardha Scheme of Basic Education (1937)
- ▶ Sergeant Plan of Education
- ▶ Kothari Education Commission (1964-66)
- ▶ Development of Vernacular
- ▶ Education Development of Technical Education
- ▶ Evaluation of British Policy on Education

9. Struggle by the Masses

- ▶ Tribal Movements
 - Bhil Uprising
 - Kol Uprising
 - Santhal Rebellion
 - Jaintia and Garo Rebellion
 - Rampa Rebellion
 - Munda Rebellion
 - Khonda Dora Uprisings
 - Tana Bhagat Movement
- ▶ Peasant Movements
 - Champaran Satyagraha
 - Kheda Peasant Struggle
 - Bardoli Movement
 - Moplah Rebellion
 - Tebhaga Movement
 - Telangana Movement

10. Terrorist and Revolutionary Movements

- ▶ Terrorist Movements
- ▶ The Revolutionary Movement
- ▶ Reasons for Failure

11. The Early Phase of the Freedom Struggle (1900–1915)

- ▶ Partition of Bengal (1905)
- ▶ Swadeshi Movement (1905)
- ▶ Origin of the Muslim League (1906)
- ▶ Resolution of Swaraj (1906)
- ▶ Surat Session: Split in Congress (1907)
- ▶ Morley-Minto Reforms (1909)

12. Middle Phase of the Freedom Struggle (1915-1930)

- ▶ World War I-Reforms and Agitation
- ▶ Home Rule Movement (1915–1916)
- ▶ Lucknow Pact (1916)
- ▶ August Declaration of 1917
- ▶ Beginning of the Gandhian Era
- ▶ The Government of India Act (1919)
- ▶ Rowlatt Act (1919)
- ▶ Jallianwala Bagh Massacre (13 April 1919)
- ▶ Khilafat Movement (1920)
- ▶ Non-Cooperation Movement (1920-1922)
- ▶ Chauri-Chaura Incident (1922)
- ▶ Trade Union Movement
- ▶ Communist Movement in India
- ▶ Swaraj Party (1922)
- ▶ Muddiman Committee (1924)

- ▶ Simon Commission (1927)
- ▶ Butler Committee (1927)
- ▶ Delhi Muslim Proposal (1927)
- ▶ Nehru Report (1928)
- ▶ All Parties Muslim Conference (1929)
- ▶ Jinnah's Fourteen Points (1929)
- ▶ Lahore Session (1929)
- ▶ Allahabad Address (1930)

13. Closer to Freedom (1930-1947)

- ▶ Civil Disobedience Movement (1930)
- ▶ The First Round Table Conference (12 November 1930)
- ▶ Gandhi-Irwin Pact
- ▶ Second Round-Table Conference (12 September 1931)
- ▶ Civil Disobedience Movement (Second-Phase)
- ▶ Third Round Table Conference (17 November 1932)
- ▶ The Communal Award (1932)
- ▶ Poona Pact (1932)
- ▶ The Government of India Act (1935)
- ▶ World War II and the Indian Political Situation
- ▶ Resignation of Congress Ministers (1939)
- ▶ Poona Resolution and Conditional Support to Britain (1941)
- ▶ August Offer of 1940
- ▶ The Individual Civil Disobedience
- ▶ Two-Nation Theory
- ▶ Demand for Pakistan (1942)
- ▶ Cripps Mission (March 1942)
- ▶ Quit India Movement (1942-1945)
- ▶ The CR Formula (1944)
- ▶ Gandhi-Jinnah Talks (1944)
- ▶ Desai-Liaquat Pact (1945)
- ▶ Wavell Plan and Simla Conference (1945)
- ▶ Provincial and General Elections of 1945
- ▶ Cabinet Mission Plan (1946)
- ▶ Azad Hind Fauj (Indian National Army)
- ▶ Direct Action Campaign (1946)
- ▶ Interim-Government (1946)
- ▶ Mountbatten Plan (1947)
- ▶ India Wins Freedom
- ▶ Indian Independence Act (1947)
- ▶ Partition of India

14. Governor Generals During British India

- ▶ Robert Clive (1754-1767)
- ▶ Lord Warren Hastings (1773-1785)
- ▶ Lord Cornwallis (1786-1793)
- ▶ Sir John Shore (1793-1798)
- ▶ Lord Arthur Wellesley (1798-1805)
- ▶ Lord George Barlow (1805-1807)
- ▶ Lord Minto-I (1807-1813)
- ▶ Francis Rawdon Hastings (1813-1823): (Marques of Hastings)
- ▶ Lord Amherst (1823-28)
- ▶ Lord William Bentinck (1828-1835)
- ▶ Sir Charles Metcalfe (1835-1836)
- ▶ Lord Auckland (1836-1842)
- ▶ Lord Ellenborough (1842-1844)
- ▶ Lord Hardinge-I (1844-1848)
- ▶ Lord Dalhousie (1848-1856 great imperialist and colonist)
- ▶ Lord Canning (1856-1857 and 1858-1862)
- ▶ Lord Elgin-I (1862-1863)
- ▶ Lord Lawrence (1862-1869)
- ▶ Lord Mayo (1869-1872)
- ▶ Lord North Brook (1872-1876)
- ▶ Lord Lytton (1876-1880)
- ▶ Lord Rippon (1880-1884)
- ▶ Lord Dufferin (1884-1888)
- ▶ Lord Lansdowne (1888-1894)
- ▶ Lord Elgin-II (1894-1899)
- ▶ Lord Curzon (1899-1905)
- ▶ Lord Minto-II (1905-1910)
- ▶ Lord Hardinge-11 (1910-1916)
- ▶ Lord Chelmsford (1916-1921)
- ▶ Lord Reading (1921-1926)
- ▶ Lord Irwin (1926-1931)
- ▶ Lord Willingdon (1931-1936)
- ▶ Lord Linlithgow (1936-1944)
- ▶ Lord Wavell (1944-1947)
- ▶ Lord Mountbatten (1947-1948)

Geomorphology**1. The origin of the Earth**

- ▶ Early Theories
- ▶ Modern Theories
- ▶ Star Formation
- ▶ Formation of Planets
- ▶ Solar System

2. The Evolution of the Earth

- ▶ Layered Structure
- ▶ Evolution of Lithosphere
- ▶ Evolution of Atmosphere
- ▶ Evolution of Hydrosphere

3. Geological History of the Earth**4. Earth**

- ▶ Latitude and Longitude including important Parallels and Meridians
- ▶ Motions of the Earth - Rotation, Revolution and their effects
- ▶ Inclination of the Earth's Axis and its effects
- ▶ Local and Standard Time and the International Date Line, Calendar
- ▶ Eclipses - Solar, Lunar

5. Origin of Life**6. Geological Time Scale****7. Interior of the Earth**

- ▶ Sources of Information
 - Direct
 - Indirect - Earth Quake Waves Volcanoes
- ▶ Crust
- ▶ Mantle
- ▶ Core

8. Geology

- ▶ Minerals
- ▶ Major Elements of the Earth's Crust
 - Minerals – Feldspar , Quartz, Pyroxene Amphibole , Mica , Olivine
 - Physical Characteristics – Crystal Form, Cleavage Fracture, Lusture, Color, Streak
 - Transparency, Structure, Hardness, Specific Gravity

- Metallic minerals – precious Ferrous , Non Ferrous
- Non-metallic Minerals – Sulphur , Phosphates , Cement
- ▶ Rocks (Aggregate of Minerals)
- ▶ Petrology
- ▶ Rocks & landforms
- ▶ Rocks & Soils
- ▶ 3 Family of Rocks
 - Igneous
 - Sedimentary
 - Metamorphic
- ▶ Rock Cycle

9. Earthquakes

- ▶ Waves: P,S, Body , Surface , Shadow Zone
- ▶ Types of Earthquakes
- ▶ Effects
- ▶ Frequency
- ▶ Locating an Epicentre

10. Volcano

- ▶ Types
 - Shield
 - Composite
 - Caldera
 - Flood Basalt
 - Mid Ocean Ridge
- ▶ Landforms (intrusive)
 - Batholiths
 - Lacoliths
 - Lapoliths
 - Phacoliths
 - Sills
 - Dykes

11. Geomorphic Processes

- ▶ Earth's Surface
 - Exogenic Forces
 - Endogenic Forces
 - Gradation, Degradation & Agradation
- ▶ Geomorphic Process
 - Endogenic Process
 - Diastrophism

- ◆ Orogenic
- ◆ Epierogenic
- ◆ Earthquakes
- ◆ Plate movements
- Volcanism
- Exogenic Forces
 - Denudation Processes
 - ◆ Weathering
 - ◆ Mass movements
 - ◆ Er

12. Distribution of Continents & Oceans

- ▶ Theories
 - Continental Drift Theory
 - Alfred Wegner 1912
 - Pangea, Panthalasa
 - Laurasia, Gondwanaland
 - Evidence in support of Continental Drift Theory
 - Jigsaw Fit
 - Rocks of Same age across oceans
 - Tillite
 - Placer Deposits
 - Distribution of Fossils
 - Forces of Drifting
 - Pole Fleeing Force
 - Tidal Force
 - Post Drift Studies
 - Convectional Current Theory
 - Mapping of the Ocean Floor
- ▶ Continents – plate Tectonics
 - Lithospheric Plates
 - Major Plate
 - Minor Plates
 - Plate Boundaries
 - Divergent
 - Convergent
 - Transform
 - Rates of Plate Movements
 - Force of plate movements
 - Indian Plate

13. Landforms and their Evolution

- ▶ Causes
 - Geomorphic Processes
 - Agents
- ▶ Geomorphic Agents

- Erosional or Destructional
- Depositional or Constructional
- ▶ Agents and their Impacts
 - Wind, Running Water, Ground Water, Glaciers, Waves & Currents
- ▶ Winds
 - One of the Two dominant agents in Hot deserts
 - Cause – Deflation Abrasion Impact
 - Erosional landforms
 - Pediments and Pediplains
 - Playas
 - Deflation Hollows and Caves
 - Mushroom, Table & Pedestal Rocks
 - Depositional Landforms
 - Barchans
 - Seif
 - Parabolic
 - Transverse
 - Longitudinal
- ▶ Running Water
 - Erosional Landforms
 - Valleys
 - ◆ Rills
 - ◆ Gullies
 - ◆ Valleys – V Shape, Gorge (Hard Rocks), Canyon (Sedimentary)
 - Potholes & Plunge pools
 - Incised or entrenched meanders
 - River Terraces – paired & unpaired
 - Depositional Landforms
 - Alluvial Fans
 - Delta
 - Flood Plains, Natural Levees, Point Bars
 - Meanders, Slip off bank, Under cut bank
 - Oxbow lake
 - Braided Channels
- ▶ Ground Water (Karst Topography)
 - Permeable Rocks
 - Percolation
 - Bedding Plains
 - Limestone and Dolomite Regions
 - Balkans, Adjacent to Adriatic regions
 - Erosional Landforms
 - Pools - Swallow Hole, Valley Sinks (Uvalas), Sinkholes, Collapse sinks (Dolines), Lapies, Ridges, Limestone Pavements
 - Caves – Altering bed of Rocks (Shale sandstone quartzit, Caves and Tunnels)



INSPIRE
IAS ACADEMY

The road to your dreams...

- Depositional landforms
 - Stalactites
 - Stalagmites
 - Pillar Columns
- ▶ Glaciers
 - Erosional Landforms
 - Cirque of Tarn Lakes
 - Hors and Serrated Regions – Arete
 - Glacial Valleys / Troughs – Fjords
 - Depositional Landforms
 - Glacial Till
 - Moraines
 - Eskers
 - Outwash Planes
 - Drumlins
- ▶ Waves and Currents
 - High Rocky Coasts & Low Sedimentary Coasts
 - Erosional Landforms
 - Cliffs
 - Terraces
 - Caves
 - Stacks
 - Depositional Landforms
 - Beaches and Dunes
 - Bars, Barriers, Spits
- ▶ Weathering
 - Weather over Earth Materials
 - Factors
 - Geological
 - Climatic
 - Topographic
 - Vegetative
 - Major Processes
 - Chemical
 - Physical or Mechanical
 - Biological
 - Chemical – Forces Chemical Action
 - Solution
 - Carbonation
 - Hydration
 - Oxidation & Reduction
 - Physical Forces Gravitational, Expansion, Water Pressure
 - Unloading & Expansion
 - Temperature changes and Expansion

- Freezing, Thawing, & Frost Wedging
- Salt Weathering
- Biological Weathering
 - Burrowing
 - Wedging
 - Plant Roots
- Effects of Weathering
 - Exfoliation (Flakin) – Exfoliation Domes
- Significance of Weathering
 - Soil Formation
 - Biomes and Biodiversity
 - Leaching / Enrichment
- Mass Movements
 - Activating causes
 - Forms of movement – Heave Flow Slide

14. Landforms across the world

- ▶ Rivers and lakes
- ▶ Mountain and Peaks
- ▶ Plateaus
- ▶ Geological Region
- ▶ Location
- ▶ Classification of The Himalayan System
- ▶ Regional Division of the Himalaya
- ▶ The Purvanchal (or the Eastern Hills)
- ▶ The Peninsula
- ▶ Peninsular Plateaus
- ▶ Physiographic Sub-Units
- ▶ Lakes
- ▶ Drainage Pattern
- ▶ Classification of Drainage
- ▶ Himalayan Drainage
- ▶ Peninsular River System
- ▶ Indian Desert
- ▶ Islands
- ▶ Coastal Plains

SOIL

- ▶ Soil Characteristics
- ▶ Factors Responsible for Soil Formation
- ▶ Stages of Soil Formation
- ▶ Soil Forming Processes
- ▶ Soil Profiles and Horizons
- ▶ Soil Classification
- ▶ Soil Erosion and Conservation



INSPIRE
INDIAN PHYSICAL GEOGRAPHY
IAS ACADEMY
 The road to your dreams

LAND

- ▶ Land-use
- ▶ Land capability classification
- ▶ Causes of Land Degradation
- ▶ Impact of Land Degradation
- ▶ Steps taken by GOI
- ▶ Sustainable Land Management

RECENT DEVELOPMENTS

▶ GEOMORPHOLOGY

- 'Perihelion': Earth closest to sun
- Nuna Supercontinent
- Mount Etna: volcano is sliding towards the sea
- Research in Third Pole Area
- Earth's Inner Core is solid but softer than thought
- Earth's Water A Result Of Asteroid Impacts And Leftover Gas From Sun's Birth: Study
- BARNARD'S STAR B: 'Super-Earth' found orbiting Sun's nearest single star
- Korolev Crater
- Mount Anak Krakatau
- Scientists discover massive mountains under Earth's crust

▶ CLIMATOLOGY

- Shrinking of Ozone layer hole
- Warming imperils clouds that deter 'hothouse' conditions
- Atmospheric Waves Experiment (AWE)
- Aurora Borealis

▶ OCEANOGRAPHY

- Misingo island
- Antarctic Circumpolar Current How does it help to keep Antarctic frozen
- GEOPHYSICAL PHENOMENON
- EARTHQUAKE & VOLCANOES
 - Havre world's largest deep ocean volcanic eruption
 - Mount Merapi Volcanic Eruption

▶ CYCLONES

- Bomb Cyclone
- Mount Soputan
- How the 2015-16 El Nino affected disease outbreaks
- Hurricane Bud
- Cyclone Sagar
- How is naming of cyclone done?
- Titli cyclone : RIMES declared it rarest of rare
- Cyclone Pabuk

- WORLD ECONOMIC GEOGRAPHY
- 1. WORLD AGRICULTURE
- The 10th Global Forum for Food and Agriculture (GFFA)
- World's first 'speed breeding' technique to boost production of wheat
- Global Agriculture and Food Security Program (GAFSP)
- Girinka Programme
- Wheat genome project
- Groundwater 'time bomb' is ticking
- The State of the World's Biodiversity for Food and Agriculture 2019
- UN World Food Programme

▶ WORLD MINERALS, INDUSTRY & INFRASTRUCTURE

- Massive reserves of mercury hidden in permafrost
- Hong Kong-Zhuhai bridge: World's longest sea crossing
- IEA Bioenergy TCP
- INDIAN GEOGRAPHY
- ▶ PHYSICAL GEOGRAPHY: INDIA
 - SC rebukes Haryana govt for throwing open for realtors miners
 - India International Cherry Blossom Festival-2018
 - Kaleswaram project
 - Natiwar Mori Hydro Electric Project
 - Mahadayi River water sharing dispute
 - Kishanganga project
 - Pakal Dul Project
 - Turga Pumped Storage Project
 - Renuka dam
 - Sita Rama Lift Irrigation Project
 - Lower Kalnai hydropower project
 - Mohar Reservoir Project
 - Arun-3 Hydro Electric Project
 - Par-Tapi-Narmada inter-state river link project
 - Uranium contamination in groundwater from aquifers across 16 states in India
 - North Koel reservoir project
 - Bansagar canal project
 - Himalayan springs
 - Polavaram multi-purpose project
 - Mekedatu dam project
 - National Water Awards
 - Sujalam Sufalam Jal Sanchay Abhiyan
 - National Cyclone Risk Mitigation Project (NCRMP)



INSPIRE
IAS ACADEMY
The road to your dreams...

<ul style="list-style-type: none"> ◦ Ensemble Prediction Systems (EPS) ▶ AGRICULTURE ◦ National Year of Millets ◦ Zero Budget Natural Farming ◦ Krishi Vigyan Kendras ◦ Water Productivity Mapping of Major Indian Crops ◦ IFFCO I-MANDI ◦ 'Global Status of Commercialized Biotech/ GM Crops in 2017' ◦ Millet Village Scheme ◦ Policy bias against rainfed agriculture ◦ Possibilities in Jute Sector in India ◦ All India Rural Financial Inclusion Survey (2016-17) ◦ International Conference on Recent Advances in Food Processing Technology (iCRAFPT) ◦ Krishi Kumbh-2018 ◦ National Mission on Government e-Market (GeM) portal ◦ Technology Initiatives for Coffee Stakeholders ◦ ENSURE – National Livestock Mission-EDEG .61 ◦ Sach GOURAV ◦ Zearalenone in cereals ◦ Soil moisture map ◦ Categorisation of Farmers in India ◦ India's First Aqua Mega Food Park ▶ INDUSTRY ◦ Delhi Mumbai Industrial Corridor (DMIC) ◦ India to build Railway link to Nepal ◦ India to build Railway link to Nepal ◦ Ratnagiri Mega Refinery ◦ Trans Regional Maritime Network (T-RMN) ▶ INFRASTRUCTURE ◦ Zoji La tunnel project ◦ Integrated Automatic Aviation Meteorological Systems (IAAMS) ◦ Sela pass tunnel 	<ul style="list-style-type: none"> ◦ Shakti Sthala ◦ India's largest dry dock at cochin shipyard ◦ India's longest elevated road ◦ Eastern Peripheral Expressway ◦ Banihal-Qazigund tunnel ◦ Water aerodrome in Chilika Lake ◦ Western Dedicated Freight Corridor ◦ Bogibeel Bridge: India's longest river bridge ◦ City Gas Distribution (CGD) Projects ◦ Kaiga power station-1 creates a world record yet again ◦ Noney Bridge: World's Tallest Railway Bridge ◦ "The Future of Rail" Report ◦ Gas Trading Hub ◦ Byorong Bridge: India's longest 300-metre single lane steel cable suspension bridge ◦ Ganga Expressway ◦ Kerala to get country's 2nd longest rail tunnel for Vizhinjam port connectivity ◦ Purvanchal Expressway ◦ HUMAN GEOGRAPHY ▶ POPULATION WORLD PATTERNS ▶ India's population grew twice as fast as China's: UN report ▶ MIGRATION ◦ India and the Global Compact for Migration ▶ HUMAN DEVELOPMENT ◦ 2019 UNDP Human Development Report on Inequality ▶ URBANIZATION ◦ Why the world should be watching India's fast growing cities: How has India intended to solve problems of unsustainable urban growth ▶ PATTERNS OF DEVELOPMENT ◦ Diversification of Rural Workforce in India
--	--

Climatology +Oceanography + Water Resources

<p>CLIMATOLOGY</p> <ul style="list-style-type: none"> ▶ Composition ▶ Gases 	<ul style="list-style-type: none"> ▶ Water Vapour ▶ Dust Particles ▶ Structure ▶ Exosphere
--	--

- ▶ Thermosphere
- ▶ Mesosphere
- ▶ Stratosphere
- ▶ Troposphere
- ▶ Altitude vs Temperature
- ▶ Solar Radiation Heat Balance Temperature
- ▶ Insolation
- ▶ Aphelion and Perihelion
- ▶ Variability of Insolation at the surface of the Earth
 - Day Season Year
 - Rotation on Axis , Angle of Inclination of sun rays , Length of the day
 - Transparency of Atmosphere, configuration of land in terms of its aspect.
- ▶ Heat Balance
- ▶ Heating and cooling of atmosphere
 - Conduction
 - Convection
 - Advection
- ▶ Terrestrial Radiation
- ▶ Heat Budget of the Planet Earth
- ▶ Macro Budget
 - Albedo
 - Shortwave Radiation
 - Long wave Earth Radiation
- ▶ Variation in the net Heat Budget at the Earth's Surface
- ▶ Temperature
- ▶ Factors controlling Temp distribution
- ▶ Distribution of Temp Month of January-July
- ▶ Range of Temp Month of January-July
- ▶ Inversion of Temperature
- ▶ Atmospheric Circulation and Weather Systems
- ▶ Atmospheric Pressure
- ▶ Vertical variation of pressure
- ▶ Horizontal distribution of pressure
- ▶ World Distribution of Sea Level Pressure
- ▶ Factors affecting the velocity and direction of the Wind
- ▶ Pressure Gradient Force
- ▶ Frictional Force
- ▶ Coriolis Force
- ▶ Pressure and Wind (Cyclonic & Anticyclone Circulation)
- ▶ General Circulation of the Atmosphere – Pattern of Planetary Winds
- ▶ Latitudinal Variation of Atmospheric Heating
- ▶ Emergence of Pressure Belts
- ▶ Migration of Belts Following apparent Path of Sun

- ▶ Distribution of continents & Oceans
- ▶ Rotation of the Earth
- ▶ Circulation
- ▶ Simplified Global Circulation – Hadley Cell , Ferrel Cell
- ▶ Seasonal Wind
- ▶ Local Wind
- ▶ Land and Sea Breezes
- ▶ Mountain and Valley Winds
- ▶ Air mass & fronts
- ▶ Extra Tropical Cyclone
- ▶ Thunderstorms
- ▶ Tornadoes
- ▶ Water in the Atmosphere
- ▶ Water Vapour
- ▶ Precipitation
- ▶ Humidity – Absolute and Relative
- ▶ Saturation – Dew Point
- ▶ Evaporation and Condensation
- ▶ Dew
- ▶ Frost
- ▶ Fog & Mist
- ▶ Clouds
 - ▶ Types – Cirrus, Cumulus, Stratus, Nimbus
 - ▶ High – Cirrus, Cirrostratus, Cirrocumulus
 - ▶ Middle – Altostratus, Alto cumulus
 - ▶ Low – Stratocumulus, Nimbostratus
- ▶ Vertical Development – Cumulus and Cumulonimbus
- ▶ Precipitation
- ▶ Rainfall, Snowfall, Sleet Hail, Hailstones
- ▶ Types of Rainfall
 - ▶ Conventional
 - ▶ Orographic
 - ▶ Cyclonic
- ▶ World Distribution of Rainfall
- ▶ World Climate
 - ▶ The Hot, Wet Equatorial Climate
 - ▶ The Tropical Monsoon and Tropical Marine Climates
 - ▶ The Savanna or Sudan Climate
 - ▶ The Hot Desert and Mid-Latitude Desert Climates
 - ▶ The Warm Temperate Western Margin (Mediterranean) Climate
 - ▶ The Temperate Continental (SteppClimate)
 - ▶ The Warm Temperate Eastern Margin (China TypClimate)
 - ▶ The Cool Temperate Western Margin (British TypClimate)



INSPIRE
IAS ACADEMY
 The road to your dreams

- ▶ The Cool Temperate Continental (Siberian) Climate
- ▶ The Cool Temperate Eastern Margin (Laurentian) Climate
- ▶ The Arctic or Polar Climate

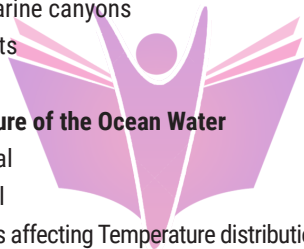
OCEANOGRAPHY

- ▶ Water on the Surface of the Earth
- ▶ Hydrological Cycle
 - Component
 - Processes
- ▶ Oceans
- ▶ Relief of the Ocean floor
- ▶ Divisions of the ocean floor
 - Continental Shelf
 - Continental Slope
 - Deep sea plain
 - Oceanic deep and Trenches
- ▶ **Minor relief features**
 - Mid oceanic ridges
 - Seamount
 - Submarine canyons
 - Guyouts
 - Atoll
- ▶ **Temperature of the Ocean Water**
 - Vertical
 - Spatial
 - Factors affecting Temperature distribution
- ▶ Latitude
- ▶ Unequal distribution of land & Water
- ▶ Prevailing wind
- ▶ Ocean Currents
 - Horizontal & Vertical Distribution
- ▶ Salinity of the Ocean Water
 - Factors affecting salinity
- ▶ Evaporation and precipitation
- ▶ Fresh water flow from rivers
- ▶ Ocean currents
 - Horizontal distribution of salinity
 - Vertical Distribution of salinity
- ▶ Density of Ocean Waters
- ▶ Movements of ocean Water
- ▶ Factors influencing Movement
 - Temperature
 - Salinity
 - Density
- ▶ Motion – Horizontal and Vertical Currents
- ▶ Waves
 - Motion of waves and water molecules
 - Characteristics of wave

- Crest and Trough
- Height
- Amplitude
- Period
- Length
- Speed
- Frequency
- ▶ Tides
 - Relation between Gravitational Forces and Tides
 - Tidal currents
 - Types of Tides
- ▶ Based on Frequency – Semi Diurnal , Diurnal, mixed
- ▶ Based on S.M.E position – spring and Neap Tides
 - Importance of Tides
- ▶ Ocean Currents
 - Primary Force that initiates the movement
- ▶ Heating of solar energy
 - ▶ Wind
 - ▶ Gravity
 - ▶ Coriolis force
 - Secondary force that influence the currents to flow
- Types of ocean currents:
 - Surface currents & Deep water currents based on Depth
 - Cold and Warm Currents based on Temperature
- Major Ocean currents of the World
- Effects of Ocean Currents

WATER RESOURCE

- ▶ Underground water resource
- ▶ Surface water resources
- ▶ Inland water resources: Utilization of inland water resources
- ▶ Oceanic Water Resources
- ▶ Utilization of oceans by man
- ▶ Water consumption patterns
- ▶ Water Pollution
- ▶ Conservation of Water Resources
- ▶ Techniques of Water Conservation



INSPIRE
IAS ACADEMY
The road to your dreams...

Demography + Human Geography + Census

1. Demography

- ▶ Concept of human resources
- ▶ Population distribution
- ▶ Physical factors
- ▶ Socio-cultural factors
- ▶ Demographic factors
- ▶ World population distribution
 - Ecumene
 - Non-ecumene
- ▶ Continent-wise distribution of population
- ▶ Density of population
- ▶ Pattern of population density
- ▶ Population increase (growth) in the world
- ▶ Causes of rapid increase in population
- ▶ Future projections
- ▶ Determinants of population growth
- ▶ Natural increase
- ▶ Characteristics of population
 - Age composition
 - Population pyramids
 - Sex composition
 - Literacy
- ▶ Theories of population growth
 - Malthusian theory
 - Marxian theory
 - Demographic Transition Theory
- ▶ Optimum population
 - Over-population
 - Under-population
- ▶ Population problems
 - Population problems of developing countries
 - Population problems of developed countries
- ▶ Population Policies: of China, of India.
- ▶ Various types of rural settlements
- ▶ Relationship between house types with relief, climate and building materials

2. Urbanization

- ▶ Basic Feature and Pattern's of India's Urbanization
- ▶ Issues of Urbanization in India
 - Rural Urban Migration

- Emergence of Slums
- Urban Transport
- Waste Disposal
- Water Supply, Drainage and Sanitation
- Electronic Waste
- Urban Poverty
- Real Estate (Regulation & Development) Bill
- ▶ Way Forward to Tackle Issues Related to Urbanization
 - Inclusive Cities/Smart cities
 - Recent government programmes: AMRUT, HRIDAY Scheme
- ▶ Migration
- ▶ Displacement
- ▶ Importance of the Rehabilitation Policy
- ▶ Urban settlements: types
 - ▶ Morphology of urban settlements
 - ▶ Migration: Push factors and pull factors
- ▶ Emigration during colonial, post-independent and post-liberalisation period
- ▶ Functional classification of cities
- ▶ Difference between boundaries and frontiers, their classification
- ▶ Rural urban fringe characteristics, advantages, problems
- ▶ National urbanisation policy
- ▶ Factors affecting rural settlements, their types and patterns

3. Census

- ▶ Literacy
- ▶ Sex Ratio
- ▶ Family Planning
- ▶ Old Age
- ▶ Age Structure
- ▶ Density
- ▶ Population Growth
- ▶ Census Terminologies



INSPIRE
IAS ACADEMY
The road to your dreams...

Mineral + Energy + Transport + Industry + Forest + Agriculture

1. Mineral resource

- ▶ Types of minerals: Metallic minerals
- ▶ Non-metallic mineral
- ▶ Distribution of minerals and mining regions
- ▶ Distribution, production and international trade of Metallic minerals: Ferrous metals: Iron ore
- ▶ Ferro-alloys and non-ferrous
- ▶ Manganese
- ▶ Chromium
- ▶ Nickel
- ▶ Tungsten
- ▶ Antimony
- ▶ Copper
- ▶ Bauxite and Aluminium
- ▶ Zinc; Lead
- ▶ Tin
- ▶ Gold
- ▶ Silver
- ▶ Platinum
- ▶ Mineral chemicals
 - Mica
 - Potash
 - Phosphate
 - Nitrates
 - Sulphur
- ▶ Conservation of mineral resources

2. Energy resources

- ▶ Classification of energy
- ▶ Production of conventional energy
- ▶ General trends of energy production and consumption
- ▶ Reserves and sources of energy
- ▶ Coal
 - Nature and origin of coal
 - Constituents and kinds of coal
 - Coal fields and coal production
 - Byproducts of coal
 - Conservation of Coal
- ▶ Petroleum
 - Nature and properties of petroleum
 - Origin and recovery
 - Exploration
 - Petroleum refining
 - Petroleum reserves
 - Producing areas
 - Consumption of petroleum

- International trade
- OPEC and its role in oil trade
- ▶ Natural gas: Reserves and Production
- ▶ Hydro-electricity
 - Advantages of hydro-electricity
 - Ideal conditions for generation of hydro-electricity
 - Distribution of potential hydro-power
 - Hydro-electric power generation in India
- ▶ Atomic (nuclear) energy
 - Atomic: source minerals: Uranium
 - World distribution of Uranium
 - Production of Uranium
 - Thorium
 - Production of Atomic (Nuclear) Energy
 - Nuclear Energy
- ▶ Alternative (non-conventional) sources of energy
 - Solar energy
 - Wind energy
 - Geothermal power
 - Tidal energy
 - Wave energy
 - Biomass energy

3. Industry

- ▶ Industrial development
- ▶ Iron and Steel Industry
 - Location of iron and steel industry
 - Early localization
 - Development of iron manufacture
 - Distribution of iron and steel industry
 - Global steel production
 - International trade
 - Growth potential of the steel industry
- ▶ Textile Industry
 - Cotton Textile Industry: Location of the industry
 - Recent trends in localization
 - Distribution and production of cotton textiles
 - Woollen textile industry: Location of the industry
 - Silk textile industry: Raw silk manufacture
 - Silk textile manufacturing
 - Synthetic (artificial) silk industry: Distribution of man-made fibre and fabrics.
- ▶ Engineering Industries
 - Machine tools and machines: Areas of production
 - Industrial machinery: Textile machinery



INSPIRE
IAS ACADEMY
The road to your dreams...

- Other industrial machinery
- Agricultural machinery
- ▶ Manufacturing of transport equipment
 - Automobile industry
 - Railway car and locomotive industry
 - Shipbuilding
 - Aircrafts Industry
- ▶ Chemical Industry & Fertilizer
 - Classes of chemicals: Branches of chemical industry
 - Heavy chemical industry
 - Production of acids and alkalies
 - Rise of chemical industry
 - Fertilizer industry: Nitrogen fertilizers
 - Phosphate fertilizers
 - Potash fertilizers
- ▶ Explosives
- ▶ Glass industry: Production of glass
- ▶ Agro-industries
 - Synthetic rubber industry
 - Pulp and paper industry: Essential conditions for pulp production
 - Production of paper and paper board
 - Newsprint
- ▶ Cement industry
 - Distribution of cement industry
 - Recent trends: Main global competitors
- ▶ Petroleum refining industry: Localization
 - Site selection of petroleum refineries
 - History of oil refineries
 - World pattern of oil refining
 - Petroleum products
- ▶ Industrial Regions
 - Characteristics of industrial regions
 - Delimitation of an industrial region
 - Principal industrial regions of the world
 - Industrial regions of Anglo America—USA, Canada, Western Europe and Central Britain, Germany, Belgium, Netherlands, France, Italy, Eastern Europe, Poland, Former USSR
 - Eastern Asia—Japan, China, the 'Dragons', India, High tech patterns.

4. Transport

- ▶ Importance and development of transport
- ▶ Means of transport
- ▶ Transport costs and economic distance
- ▶ Operating costs in transport
- ▶ Relative importance of means of transport: Railways, Roads, Pipeline, Oceans, Air transport
- ▶ Profits and freight rates
- ▶ Government's transport policy

- ▶ Transport patterns in the world: Oceanic transport
- ▶ Ocean transport routes
- ▶ Inland waterways
- ▶ Main regions of inland waterways
- ▶ Railways: Factors affecting the railroads
- ▶ Distribution of railroads in the world
- ▶ Air transport: Factors influencing air transport
- ▶ Air transport in various continents
- ▶ Pipeline transport
- ▶ Petroleum (oil) pipelines
- ▶ Gas pipelines

5. Vegetation resources

- ▶ Types of natural vegetation
- ▶ Forests
- ▶ Significance of forests
 - Economic significance, Ecological significance
 - Cultural significance
- ▶ Factors of forest development
- ▶ Extent of forest cover
- ▶ Classification of forests
 - Grasslands
 - Desert vegetation
 - Tundra Vegetation
- ▶ Economic utilization of forests
 - ▶ Deforestation
 - Deforestation in tropical forests
 - Deforestation in temperate forests
 - Rate and extent of deforestation
 - Causes and factors of deforestation: Immediate causes of deforestation
 - Indirect deforestation
 - Underlying causes of deforestation
- ▶ Conservation of forests
 - Forest conservation strategies
 - Reforestation
 - Monoculture plantation
 - Afforestation
- ▶ Types of forestry
- ▶ Social forestry
- ▶ Agro-forestry

6. Basic terms related to Agriculture

- ▶ Performance of the agriculture sector
- ▶ Types of farming in India
- ▶ Dry zone farming
- ▶ Organic farming
- ▶ Cropping seasons in India
- ▶ Cropping Pattern in India



- ▶ Agriculture regionalization
- ▶ Infrastructure factors: Seeds; Fertilizers; Irrigation
- ▶ Land use pattern in India
- ▶ Institutional Factors as land reform
- ▶ Horticulture sector in India
- ▶ Agricultural revolutions
- ▶ Agricultural labours
- ▶ Price Policy for Agriculture
- ▶ Agricultural marketing
- ▶ Agricultural Insurance
- ▶ Agricultural Census
- ▶ Major schemes in agricultural sector
- ▶ National Policy for farmers
- ▶ Impact of climate change on agriculture
- ▶ What is sustainable agriculture?
- ▶ Use of IT in agriculture
- ▶ Agriculture Issues and Challenges

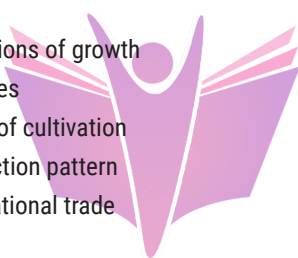
7. Productivity of Crops and conditions for growth

- ▶ Wheat
 - Conditions of growth
 - Varieties
 - Types of cultivation
 - Production pattern
 - International trade
- ▶ Rice
 - Conditions of growth
 - Varieties
 - Methods of cultivation
 - Production pattern
 - International trade
- ▶ Maize (Corn)
 - Conditions of growth
 - Production pattern
 - International trade
- ▶ Barley
 - Conditions of growth
 - Production pattern
 - International trade
- ▶ Oats
- ▶ Rye
- ▶ Beverages
- ▶ Tea
 - Condition of growth
 - Production pattern
 - International trade
- ▶ Coffee

- Types of coffee
- Conditions of growth
- Production pattern
- International trade
- ▶ Cocoa
 - Conditions of growth
 - Production pattern
 - International trade
- ▶ Tobacco
 - Conditions of growth
 - Production pattern
 - International trade
- ▶ Fibre Crops
 - Cotton
 - Varieties of cotton
 - Conditions of growth
 - Production pattern
 - International trade
 - Jute
 - Conditions of growth
 - Production pattern
 - International trade
 - Substitutes of Jute: Flax, Hemp
 - Raw Silk
 - Production pattern
 - States
- Natural Rubber
 - Other sources of rubber
 - Plantations in South-east Asia
 - Production pattern
- Sugarcane
 - Conditions of growth
 - Production pattern
 - International trade
 - Sugarbeet—Conditions of growth
 - Production pattern
 - Sugar industry
 - Sugar consumption
 - International trade.

8. Recent developments in agriculture field

- ▶ NITI Aayog proposed the idea of taxation of agricultural income
- ▶ Removing agricultural commodities from the essential commodities Act: NITI Aayog
- ▶ Feminization of Agriculture
- ▶ e-auction portal : e-Rakam for selling agricultural produce
- ▶ "AGRI-JDAAN" – Food and agri-business acceleration 2.0



INSPIRE
IAS ACADEMY
The road to your dreams...

to bring startup revolution

- ▶ APEDA (Agricultural and Processed Food Products Export Development Authority Act)
- ▶ SMAM (Sub-Mission on Agricultural Mechanization)
- ▶ Jute-ICARE Project
- ▶ Project CHAMAN
- ▶ Doubling the farmers income: Ashok Dalwai Committee
- ▶ RKVY-RAFTAAR
- ▶ Agro Irradiation Centers
- ▶ Agricultural Marketing and Farm Friendly Reforms Index
- ▶ National Food Security Act
- ▶ Digitization and Agriculture
- ▶ Direct Benefit Transfer in Fertilizer Sector
- ▶ Draft Regulation on Fortification of Foods
- ▶ Law Commission Recommendation on Food Laws
- ▶ Concept of Modern Terminal Markets
- ▶ Animal Husbandry, Dairying and Fisheries
- ▶ e-Pashuhaat Portal
- ▶ Schemes of Bio-Tech Kisan and Cattle Genomics
- ▶ RashtriyaGokul Mission
- ▶ Mission Fingerling
- ▶ Ornamental Fishing
- ▶ Agricultural Science Congress
- ▶ RubSiS
- ▶ Ethanol Blending
- ▶ National Bureau of Plant Genetic Resources
- ▶ Amendments to the NABARD Act, 1981
- ▶ Revenue Insurance Scheme for Plantation Crops
- ▶ Neem Coating of Urea
- ▶ National Agriculture Market

9. Recent developments in Transport Sector

- ▶ Rural electrification corporation: First green bond
- ▶ Time and costs over runs of infrastructure projects
- ▶ India's First Mega Coastal Economic Zone (CEZ) to come up in Maharashtra
- ▶ Logistic sector gets infrastructure status
- ▶ AIIB approves \$150 million for India infrastructure fund
- ▶ Ro-Ro Ferry service
- ▶ Bharatmala project for construction of 24,000 km of highway connecting Western and Eastern part
- ▶ Union Ministry of shipping is planning to expand Logistics Data Bank (LDB)
- ▶ Railways India Development Fund
- ▶ National Infrastructure Investment Fund
- ▶ Defence Innovation Fund

- ▶ Flexi Fare Method in Railway
- ▶ Rail Cadre Management
- ▶ TRI-NETRA in Railways
- ▶ National Rail Plan 2030
- ▶ India's First Caterpillar Train
- ▶ Green corridor concept
- ▶ Made in India 'Medha' train
- ▶ Antyodaya Express
- ▶ Smart Railway Station
- ▶ Yatri Mitra Seva
- ▶ National Highways Interconnectivity
- ▶ Vehicle Fleet Modernization Programme
- ▶ Transit Oriented Development Policy
- ▶ Logistic Efficiency Enhancement Programme
- ▶ Indian Bridge Management System
- ▶ National Road Safety Policy
- ▶ TARANG
- ▶ E-trans
- ▶ DEEP (Discovery of Efficient Electricity Price)
- ▶ GARV II APP
- ▶ Trading of Energy Saving Certificates
- ▶ Powers for all 24x7
- ▶ Draft National Electricity Plan
- ▶ Habitat Commitment Index

10. Recent developments in Industrial Sector

- ▶ Disinvestment of PSUs
- ▶ Report titled "India's Labor Market: A New Emphasis on Gainful Employment"
- ▶ Wage code Bill in line of recommendations of 2nd National Commission on Labor
- ▶ CAR for the operation of Drones in India.
- ▶ Draft Evaluation template for the star rating of Minor Minerals
- ▶ Online database containing GIS-Enabled portal Maps land related information
- ▶ Chennai-Bangalore Industrial Corridor
- ▶ Apex Corridor Developmental Authority
- ▶ TAMRA PORTAL
- ▶ Mining Surveillance System
- ▶ COAL MITRA
- ▶ M-SIPS for Electronic Sector
- ▶ Indian Enterprise Development Service
- ▶ Trade Receivables Discounting System
- ▶ SME Business Environment Index



INSPIRE
IAS ACADEMY
The road to your dreams...

BIOLOGY

1. Chemical Building Blocks of Life

2. History and Origin of Life

3. Cells

- ▶ Cell Structure
- ▶ Membranes
- ▶ Cell-Cell Interactions
- ▶ Energy and Metabolism
- ▶ Respiration
- ▶ Photosynthesis
- ▶ How Cells Divide
- ▶ Sexual Reproduction

4. Genetics

- ▶ Inheritance
- ▶ DNA, The Genetic Material
- ▶ Gene Expression
- ▶ Gene Regulation
- ▶ Mutation
- ▶ Recombinant DNA Technology

5. Classification of Living Things

- ▶ Classification and Domains of Life
- ▶ General Biology/Classification of Living Things/ Viruses
- ▶ Prokaryotes
- ▶ Eukaryotes
 - Protists
 - Plants
 - Fungi
 - Animals

6. Evolution

- ▶ Evolution of Life
- ▶ Animal Evolution
- ▶ Human Evolution

7. Tissues

- ▶ Epithelial tissue
- ▶ Connective tissue
- ▶ Muscle tissue

8. Economic Zoology

- ▶ Beneficial animals: Corals - Earthworm - Vermiculture - Beneficial insects - Prawns - Lobsters - Crabs - Pearl oysters - Fishes - Guano - Aquarium - Vivarium.
- ▶ Harmful animals: Disease causing organisms - Vectors - Poisonous organisms - Fouling organisms - Pests.

9. Endocrine system

- ▶ Hypothalamus
- ▶ Pineal body (epiphysis)
- ▶ Pituitary gland (hypophysis)
- ▶ Thyroid
- ▶ Adrenal glands
- ▶ Reproductive glands

10. Respiration

- ▶ External and Internal Respiration
- ▶ Respiratory system in Plants
- ▶ Respiratory System in Insects
- ▶ Respiratory System in Humans and Animals

11. The Transport System in Organisms

- ▶ Transport system in a Cell
- ▶ Transport System in Plants
- ▶ Transport System in Animals
- ▶ Blood Vascular System
- ▶ The Lymphatic System

12. Skeletal and Muscular Systems

- ▶ Bone and Skeleton System (Osteology)
- ▶ Ligaments (Syndesmology)
- ▶ Muscular System (Myology)
- ▶ Vertebrates

13. Reproduction

- ▶ Asexual Reproduction in Plants
- ▶ Asexual Reproduction in Animals
- ▶ Sexual Reproduction in Plants
- ▶ Sexual Reproduction in Animals
- ▶ Sexual Reproduction in Humans

14. Excretion, Osmoregulation and Thermoregulation

- ▶ Excretory products



- ▶ Excretion in plants
- ▶ Excretion in Animals
- ▶ Osmoregulation, ADH and formation of Urine in Animals
- ▶ Physiological and Behavioural Adjustments

15. Nutrition

- ▶ Classification by Source of Energy and Carbon
- ▶ Plant Nutrition
- ▶ Animal Nutrition
- ▶ Human Diet
- ▶ The Digestive System

BIOTECHNOLOGY

1. Genetics and biotechnology

- ▶ Industrial genetics
- ▶ Protoplast and cell fusion technologies
- ▶ Genetic engineering
- ▶ DNA sequencing
- ▶ Nucleic acid probes
- ▶ Genomics and proteomics
- ▶ Antisense and RNA interference
- ▶ Potential laboratory biohazards of genetic engineering
- ▶ Bioprocess/fermentation technology

2. Biological fuel generation

- ▶ Global warming and the significance of fossils fuels
- ▶ Photosynthesis: the ultimate energy source
- ▶ Biofuels from biomass
- ▶ Bioethanol from biomass
- ▶ Biodiesel
- ▶ Methane
- ▶ Hydrogen

3. Environmental biotechnology

- ▶ Microbial Ecology Environmental Biotechnology
- ▶ Waste water and sewage treatment
- ▶ Landfilling technologies
- ▶ Composting
- ▶ Bioremediation

- ▶ Detect and monitoring of pollutants
- ▶ Microbes and the geological environment
- ▶ Environmental sustainability and clean technology

4. Plant and forest biotechnology

- ▶ Plant biotechnology
- ▶ Forest biotechnology

5. Animal and insect biotechnology

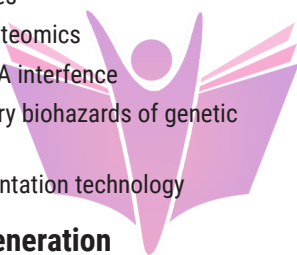
- ▶ Genetic manipulation and transgenic animals
- ▶ Genetically engineered hormone and vaccines
- ▶ Animal organs for human patients
- ▶ Genetically modified insects

6. Food and beverage biotechnology

- ▶ Food and beverage fermentations
- ▶ Microorganisms as food
- ▶ Enzymes and food processing
- ▶ Amino acids, vitamins and sweeteners
- ▶ Organic acids and polysaccharides
- ▶ Public acceptance and safety of new biotechnology foods
- ▶ Biotechnology and medicine
- ▶ Pharmaceuticals and biopharmaceuticals
- ▶ Antibiotics
- ▶ Vaccines and monoclonal antibodies
- ▶ Biopharmaceuticals/therapeutic proteins
- ▶ Pharmacogenetics
- ▶ Molecular biology and human disease
- ▶ Diagnostics in developing countries
- ▶ Gene therapy
- ▶ Systems biology and medicine
- ▶ Stem cell biotechnology

7. Protection of biotechnological inventions

- ▶ Patent protection Trade secrets
- ▶ Plant breeders' rights



INSPIRE
IAS ACADEMY
The road to your dreams...

Space + Defence + Nuclear + Institutions + IT + Electronics + Telecom + Nano + Robotics

INSTITUTIONS & POLICY

- ▶ India's policy in the field of the science and technology
 - The S&T policy resolution in 1958
 - S&T policy of the 1983
 - S&T policy of the 2003
 - S&T policy 2013
- ▶ Institutional structure
 - Department of Science & Technology
 - CSIR
 - Survey of India
 - Science and Engineering Research Council
 - Technology Development Board
 - National Accreditation Board For Testing And Calibration Laboratories
- ▶ Science and technology as a source of Human Resource Development
- ▶ Awards related to Science
- ▶ New Initiatives Aligned with the National Agenda
- ▶ India and World collaboration in science projects
- ▶ Technology Vision Document 2035
- ▶ National Biotechnology Development Strategy 2015-2020
- ▶ National Intellectual Property Rights Policy
- ▶ Organ donation rules in India
- ▶ Policy on Synthetic Biology

SPACE

- ▶ Types of orbits
- ▶ Launch Vehicle
- ▶ Satellite communication in India
- ▶ INSAT Satellite application
- ▶ Remote sensing applications
- ▶ Cryogenic rockets
- ▶ Global Positioning System
 - Galileo
 - GLONASS
 - IRNSS
 - GAGAN
- ▶ Chandrayaan – I & II
- ▶ Mars Orbiter Mission
- ▶ Space Organisations

- ▶ Space race/Space junk
- ▶ Recent updates
 - South Asia Satellite: Significance
 - Neutrino Observatory
 - Solar Mission- ADITYA
 - Gravitational Waves

DEFENCE

- ▶ Missile system and classification
 - On the basis of type
 - On the basis of launch vehicle
 - On the basis of Range
 - On the basis of propulsion system
- ▶ India's Missile System
 - Agni
 - Prithvi
 - Trishul
 - Nag
 - Dhanush
 - Astra
 - Prahaar
- ▶ BrahMos Missile System
- ▶ Indian Submarines and Naval Ships
- ▶ Light Combat Aircraft
- ▶ Unmanned Aerial Vehicle
- ▶ Stealth technology
- ▶ Chemical Weapon
- ▶ Biological Weapon

Nuclear energy

- ▶ Types of nuclear reactions
- ▶ Nuclear Power Reactor
- ▶ N-Power Policy of India
- ▶ Advantages of Nuclear Energy
- ▶ Disadvantages of Nuclear Energy
- ▶ Non-energy applications of Nuclear energy
- ▶ Impact of Radiation
- ▶ Issue of Radioactive Waste
- ▶ Institutions involved in Nuclear energy Development, AERB
- ▶ Safety standards in Nuclear Power plants
- ▶ Nuclear & Radiological Disasters

IT, ELECTRONICS & TELECOM

- ▶ **Computers**
 - Generation of computers
 - Computer terminologies
 - Supercomputer and its applications
- ▶ **Information technology**
 - Components of IT
 - IT enabled services
 - Application of IT
- ▶ **Display technologies**
 - Cathode ray
 - LCD
 - LED
 - Plasma Monitors
 - OLED
- ▶ **Telecommunications**
 - Mobile generations
 - Smartfone
 - Important concepts
- ▶ **Government initiatives**
 - Digital India Initiative
 - MeghRaj
 - Code Free for India
 - E-Kranti
 - Bharat Net project
 - Bharat QR
- ▶ **Contemporary debates**
 - Net Neutrality
 - Internet of Things
 - Big Data Initiative and Privacy
 - Cyber crime and security

NANO-SCIENCE & NANO TECHNOLOGIES

- ▶ What is Nanoscience and Nanotechnology?
- ▶ Origination of Nanoscience and Technology
- ▶ Basics of Nanoscience
- ▶ Nanomaterials
- ▶ Applications of nanotechnology
 - Nano medicine
 - Semiconductors and computing
 - Food
 - Textiles
 - Sustainable energy
 - Environment
 - Transport
 - Space

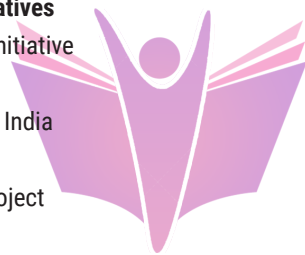
- Agriculture
- ▶ Adverse Health and Environmental Impacts of Nanotechnology
- ▶ Social and Ethical Impacts:
- ▶ Nano-science and nano-technology in India

1. Robotics

- ▶ What is Robotics?
- ▶ Machine vs Computer vs Robots
- ▶ Parts of a Robot
 - Controller
 - Manipulator
 - End Effector
 - Sensor
- ▶ Classification of Robots
 - Rolling Robots
 - Walking Robots
 - Autonomous Robots
- ▶ Artificial Intelligence
- ▶ Advantages and Disadvantages of Robot
- ▶ Applications of Robotics
 - Industrial Sector
 - Aerospace
 - Healthcare Delivery
 - Outer Space
 - Exploration
 - Military Robots
 - Disaster Areas
 - Entertainment
 - Agriculture
 - Domestic work

2. RECENT DEVELOPMENTS

- ▶ **INFORMATION TECHNOLOGY & COMPUTERS**
 - Cyber-Physical System
 - BullSequana Supercomputer
 - National Supercomputing Mission
 - Pratyush Computer
 - SpiNNaker – World's Largest Brain – Like Supercomputer
 - Shakti – India's first indigenous Microprocessor
 - India's First Locally Developed 4G/LTE Telecom System
 - 5G
 - IIT – Delhi launches first 5G Radio Lab
 - Open Transit Data Platform
 - Three Factor Authentication
 - Facial Authentication Working
 - First in Asia: Facial recognition technology at



INSPIRE
IAS ACADEMY
The road to your dreams...

- Bengaluru airport
- Digital Sky Platform
- M2M'Communication
- Mobile Towers are harmless: CPCB
- Adoption of Blockchain Technology to Stop Bank Frauds
- India's First Blockchain District in Telangana
- NASSCOM unveils centre for Data, AI
- Mumbai to have India's First Artificial Intelligence Centre
- Model International Center for Transformative AI (ICTAI)
- Saposhi
- GravityRat Malware
- ToneTag
- World Congress on Information Technology

► **SPACE TECHNOLOGY & EVENTS**

- ISRO's Mission/Programme:
- NASA's Mission/Programme:
- Other Agencies Missions
- Point Nemo
- Exoplanet
- 'Super-Earth' in Constellation Cassiopeia
- Galaxy Proto-Supercluster – Hyperion
- Einstein's Theory of Relativity
- Einstein's theory
- Sun's gravity
- Einstein Ring
- Sunspot Cycle
- Method to simulate, predict solar activity over ten years developed
- ISRO is planning to mine Moon
- NASA confirms saturns rings will be gone in million years
- New Source of Neutrinos in Space discovered
- Earth has three moons
- China unveils 'Heavenly Palace' space station
- The International Space Station (ISS) is celebrating its 20th birthday
- Remove DEBRIS
- The case for making Pluto a planet again
- Icarus- farthest star
- Cosmic Microwave Background Radiation (CMBR)
- Green Propellant
- Plan to Prevent Asteroid Attack
- Cooperation in the peaceful uses of outer space
- 'EPIC' planet
- Interstellar Mapping and Acceleration Probe
- Atacama Large Millimeter/submillimeter Array

- High Resolution Imaging Science Experiment
 - GLONASS of Russia
 - Pakistan's remote sensing satellites PRSS-1 and PakTes-1A
 - Atacama Large Millimeter Array (ALMA)
 - World's fastest man-made spinning object
 - India-Based Neutrino Observatory
 - Human space flight Programme
 - NASA's Kepler Space Telescope retired
 - NASA Parker Solar Probe Mission
 - Dwarf planet 'The Goblin' discovery
 - Space X BFR lunar Mission
 - Meteorite found in Rajasthan
 - Unispace Nanosatellite Assembly & Training programme (UNNATI)
 - The Lyrid meteor shower
 - RAMA (Reconstituting Asteroids into Mechanical Automata)
 - Uakitite
 - Draft Space Activities Bill, 2017
 - Resource Prospector Mission
 - GRACE MISSION
 - Gaofen – 11
- **DEFENCE TECHNOLOGY**
- India's Missile Development Program
 - PrithviSeries
 - Agni Series
 - Akash
 - Nag
 - Man Portable Anti-Tank Guided Missile (MPATGM)
 - Trishul
 - Brahmos
 - Ballistic Missile Defence System
 - Prithvi Air Defence (PAD)
 - Advanced Air Defence (AAD)
 - K-15 Sagarika
 - Dhanush
 - Shaurya
 - Nirbhay
 - Prahaar
 - Astra
 - Pinaka Rocket
 - Made in India' Artillery boost
 - Advanced Towed Artillery Gun System (ATAGS)
 - Rustom-2
 - Offshore Patrol Vessel ICGS Varaha launched
 - Vijaya: Indigenously built patrol vessel commissioned by Indian Coast Guard
 - INS Chakra



- Scorpene Submarine Programme
- Maritime boundary
- Vehicle Location Tracking Devices and Emergency Buttons
- LCA TEJAS clears maiden mid-air refuelling trial
- India's first missile tracking ship
- Solid Fuel Ducted Ramjet (SFDR)
- Defence Innovation Hubs
- India's first indigenous anti-nuclear medical kit
- Defence Industry Corridor
- Bhabha Kavach
- Mission Raksha Gyan Shakti
- Intermediate Range Nuclear Forces Treaty, 1987

► **HEALTH & BIOTECHNOLOGY**

- Rare Diseases
- Thalassaemia
- Down Syndrome
- New Classification of Diabetes
- Maturity-Onset Diabetes of the Young (MODY)
- Lymphatic Filariasis
- New Influenza Research Programme
- Drug-resistant Superbug Spreading
- Zoonotic Diseases
- Nipah Virus
- Lassa Fever
- Nepal, first country in South-East Asia to Eliminate Trachoma
- Measles Rubella Vaccination
- Zearalenone, a fungal toxin
- Oxytocin
- WHO Publishes Essential Diagnostics List
- Generic Drugs: New Rules Soon for Labelling
- Fixed Dose Drug Combinations (FDCs)
- World's first Bio-electronic medicine
- 5th Global Forum on TB Vaccines
- Drug Eluting Stents
- Dual Mechanism for Embryonic Stem Cells to Maintain Pluripotency
- Scientists Grow Human Oesophagus in Lab
- Three-Parent Babies Permitted in U K
- New Sheep Insemination Technique
- Mass Embryo Transfer
- CRISPR Technology
- Telerobotic Surgery
- Bionic mushrooms
- Biosensor Technique to Detect Chikungunya Virus Mitra Clip

- Blockchain Technology in Drug Supply-chain
- Rosehip neurons: The newest neuron in the human brain
- Nerve Agent
- WHO called for the Elimination of the so-called 'One Centimetre Per Hour' Benchmark
- Earth BioGenome Project
- 100k Genome Asia Project
- Human Microbiome
- Integrated Health Information Platform (IHIP)
- Eat Right India Movement
- Food Fortification
- Transgenic Rice with Reduced Arsenic Accumulation
- Fighting Fake Drugs through Blockchain
- Project Dhoop
- Eliminate Trans-fats by 2022
- New Norms for Labelling Packaged GM food
- Animal-Free Testing for Drugs
- Elysia chlorotica
- Quadrivalent Influenza Vaccine
- Fortified Rice
- Coloured X-Ray on Human
- 'P Null' Phenotype
- Bacteria Wolbachia
- Affordable Water Disinfection System- Oneer
- Bisphenol A (BPA)

► **NIFTEM**

- Scutoid: A New Shape Discovered
- Concept of Living Will
- ALTERNATIVE TECHNOLOGIES
- Methanol as cooking fuel
- Gas Hydrates or Flammable Ice:
- World's first hydrogen train
- Repurposed Used Cooking Oil (RUCO)
- Hydrogen-CNG
- Europe's first solar panel recycling plant
- Bengaluru Maps its Solar Wealth
- Shakti Shala Solar Park
- Global Centre for Nuclear Energy Partnership
- Apsara – U Reactor
- Experimental Advanced Superconducting Tokamak (EAST)
- World's first Hyperloop passenger capsule unveiled
- Hyperloop between Mumbai and Pune
- Aerogel- Super-insulating gel
- Thermal Battery
- India's first coal-gastification fertilizer plant

INSPIRE
IAS ACADEMY
The road to your dreams...

<ul style="list-style-type: none"> ◦ Quadricycles ▶ NANO TECHNOLOGY ◦ Graphene ◦ IIT-Madras unveiled world's first remotely operable LEAP microscope ◦ Particle Decay ◦ Rydberg Polarons ◦ KATRIN Experiment ◦ Cyclone-30 India's biggest cyclotron facility becomes operational ▶ SCHEMES & INITIATIVES ◦ Prime Minister's Science Technology And Innovation Council (PM-STIAC) ◦ Young Scientist Programme ◦ Innovate India Platform ◦ Innovation Cell ◦ National Statistics Day ◦ Children's Science Congress ◦ Imprint II ◦ Bharatnet Covers 1 Lakh Gram Panchayats ◦ National Viral Hepatitis Control Program ◦ National Biopharma Mission ◦ Agmark online system ◦ World Intellectual Property Organization (WIPO) treaties ◦ National Intellectual Property (IP) Award 2018 ◦ Intellectual Property Rights Mascot ◦ GI Tag ◦ India to expand polar research to Arctic 	<ul style="list-style-type: none"> ◦ Deep Ocean Mission (DOM) ◦ Chai Sahay App by Tea Board of India ◦ MISCELLANEOUS ◦ Glass Fibre Reinforced Gypsum Concrete ◦ EyeROV TUNA India's first underwater robotic drone handed over to NPOL ◦ Nobel Prize 2018 ◦ Prof SN Bose 125th Anniversary ◦ Stephen Hawking ◦ Raman Effect ◦ Li-Fi ◦ Vaterite ◦ Impact Based Forecasting Approach ◦ India's first engine-less train ◦ Other Scientific Achievements in India in 2018 ◦ Dry Sorbent Injection (DSI) ◦ Microcrystallites ▶ SARAS ◦ Silver Copper Telluride ◦ Ice VII ◦ 2019 - International Year of the Periodic Table of Chemical Elements ◦ New Element with Magnetic Properties Discovered ◦ Indian National Centre for Ocean Information Service (INCOIS)
---	---