



ANCIENT HISTORY

LECTURE-1

- Sources of Ancient Indian History
- Pre-historic phases-
 - Stone age (Palaeolithic, Mesolithic and Neolithic)
- Chalcolithic phase (Ahar and Jorwe culture should be discussed in detail)
- **INDUS VALLEY CIVILISATION**
 - Origin and extent
 - Town planning
 - Agriculture
 - Animal domestication
 - Technology and craft
 - Trade and traded articles with other civilizations
 - Political organisation
 - Pottery and terracotta figures
 - Beliefs and faiths
 - Important excavated sites and their findings
 - Decline of IVC

LECTURE-2

- **VEDIC & LATER VEDIC PERIOD**
 - **Vedic literature**- Vedas, Upanishad, Purana, Brahmanas, Aranyakas and others and concerned themes
 - **Aryans** – advent and their origin, their society and its features such as caste system and status of women in it.
 - Religion and compare changes in Vedic to later Vedic phase
 - Political organisation
 - Pottery
 - Various schools of Indian Philosophy
 - Vedanta and Vedanga.

TEST- 1

CODE- AH01

LECTURE-3

- **JAINISM AND BUDDHISM**
 - Reasons to rise these religions
 - Their founders and their life events
 - Core ideals of both religions- such as, middle path, triratnas etc.
 - Followers and patronage
 - Literature – Tripitakas and Angama and other sources
 - Sects- Hinayana, Mahayana and Svetambara and Digambara, other smaller sects
 - Similarities and differences between these religions
 - Reasons to decline

TEST- 2

CODE- AH02



LECTURE-4	<ul style="list-style-type: none">• Mahajanpadas and their extent• Alexander invasion• Reasons for the rise of Magadha empire• Mauryan Age<ul style="list-style-type: none">➤ Chandragupta Maurya➤ Ashoka – dhamma and pillars➤ Mauryan administration and economy➤ Literature- Arthshastra and Mudraraksha and saptang theory➤ Reasons to decline Mauryan empire
LECTURE-5	<ul style="list-style-type: none">• Post mauryan period-<ul style="list-style-type: none">➤ Indo-Greeks, Shakas, Parthians, Kushanas, and society under them➤ Kanishka- should be discussed in detail➤ Gandhara and Mathura school of art➤ Satvahanas of Deccan and society under them➤ Chola, Chera and Pandya➤ Beginnings of Brahmanism and Sangam literature
TEST- 3	CODE- AH03
LECTURE-6	<ul style="list-style-type: none">• Gupta Empire-<ul style="list-style-type: none">➤ Chandragupta-1,➤ Samundragupta and his policies and PrayagPrashasti➤ Chandragupta-II➤ Administration , trade and economy and social development under Gupta rulers➤ Art and culture, science and technology and golden age➤ Fall of empire
LECTURE-7	<ul style="list-style-type: none">• Post Gupta Era<ul style="list-style-type: none">➤ Harsha➤ Vakatakas&Chalukyas of Badami➤ Pallavas➤ Other developments in south India
TEST- 4	CODE- AH04
MEDIEVAL INDIAN HISTORY	
LECTURE-8	<ul style="list-style-type: none">• Ancient to medieval transition phase• The Palas,• The Gurjara-Pratiharas• Rashtrakutas and tripartite struggle• administration, economy and society under Palas, Pratihara and Rashtrakutas• Chola Empire<ul style="list-style-type: none">➤ Rajaraja and Rajendra I (discussed in detail)➤ Architecture , society and military strength➤ Local government and• Mahmud of Ghazni• Muhammad Ghori



LECTURE-9 & 10	<ul style="list-style-type: none">• THE DELHI SULTANAT<ul style="list-style-type: none">➤ Slave Dynasty- QutbuddinAibak, Iltutmish, Raziya, Balban and major developments during slave dynasty➤ The Khalji Dynasty- AlauddinKhalji (reforms and military Campaigns)➤ The Tughlaq Dynasty- GhiyasuddinTughlaq<ul style="list-style-type: none">✓ Muhammad bin Tughlaq's Experiments✓ Firoz Shah Tughlaq and Important Features of Firoz Shah's Reign➤ Sayyid Dynasty➤ Lodi Dynasty➤ Government, and economic and Social life under the Delhi sultanat
TEST- 5	CODE- MH01
LECTURE-11	<ul style="list-style-type: none">• THE AGE OF VIJAYANAGAR AND BAHMANI KINGDOM<ul style="list-style-type: none">➤ Krishna Deva Raya- administration, economy, society and architecture of vijaynagar➤ Mahmud Gawan➤ The Advent of the Portuguese➤ Mahmud Begarha• Malwa and Mewar• RanaKumbha• ZainulAbidin• The Sufi Movement- famous silisila's such as chisti and suharnwardi• Bhakti Movement- Sankara, Ramanuja, Madhava, Surdas, Mirabai, Tulsidas, Chaitanya, Ramananda, Kabir ,• Guru nanak and sikkhism• The Vaishnavite Movement
TEST- 6	CODE- MH02





LECTURE-12 & 13	<ul style="list-style-type: none">• MUGHAL EMPIRE<ul style="list-style-type: none">➤ Babur - The Battle of Panipat I, The Battle of Khanwaetc➤ Humayun's Conquest of Gujarat and his Tussle with Sher Shah➤ Sher Shah Suri and his countributions➤ AKBAR-<ul style="list-style-type: none">✓ Battle of Panipat II✓ Land Revenue Administration- Zabti or Bandobast system. Dahsala System✓ Mansabdari System✓ Rajput policy✓ Din-i-Ilahi and religious policy✓ Mughal Advance towards the Deccan - factors which impelled Akbar to involve himself in the Deccani affairs.➤ Jahangir- Nurjahan and her influence➤ Shah jahan- architecture and painting development• Economic and social life under the Mughals• Cultural and religious developments• Disintegration Of The Mughal Empire<ul style="list-style-type: none">➤ Aurangzeb's Reign, Aurangzeb's Religious Policy➤ Aurangzeb and the Deccani States➤ Rise of Malik Ambar➤ Popular Revolts and Movements for Regional Independence: Jats, Satnamis, Afghans and Sikhs➤ Cultural Contribution of the Deccan States- Ali Adil Shah, Ibrahim Adil Shah II, Muhammad QuliQutb Shah➤ Shivaji➤ Shivaji's Administration
TEST- 7	CODE- MH03
MODERN INDIAN HISTORY	
LECTURE-14	<ul style="list-style-type: none">• British Conquest of India<ul style="list-style-type: none">➤ Decline of Mughal empire➤ Rise of regional politics➤ India in Eighteenth Century➤ Advent of Europeans➤ Factors that led to conquest of India by British➤ Conquest of regional powers➤ Resistance of Indian powers and causes of failure➤ Evolution of British paramountcy over princely states
LECTURE-15	<ul style="list-style-type: none">• British Administration<ul style="list-style-type: none">➤ British colonialism in India➤ British policies in India➤ British Economic Policies and their impact➤ Rise of capitalist class➤ Activities of Christian Missionaries➤ Governors- Generals and administration till 1857➤ Colonial administration till 1857



LECTURE-16	<ul style="list-style-type: none">• Early Resistance to British Rule<ul style="list-style-type: none">➤ Tribal revolts➤ Various tribal movements in India➤ Civil rebellions and peasant revolts➤ Nature and significance of civil rebellions➤ Various peasant movements in India The revolt of 1857 and personalities associated
LECTURE-17	<ul style="list-style-type: none">• Social Reforms in British India<ul style="list-style-type: none">➤ Regeneration, reform and renaissance in India➤ Social reformers in India➤ Reforms in western India➤ Reforms in south India➤ Role of reformers➤ Nature and limitation of 19th century renaissance➤ Reasons of rise➤ Caste movement in south India➤ Caste movements in northern and eastern India
TEST- 8	CODE- MI01
LECTURE-18	<ul style="list-style-type: none">• Nationalism in India<ul style="list-style-type: none">➤ Rise of nationalism in India➤ Social basis of Indian Nationalism➤ Rise and growth of Indian National Congress➤ Policies and programmes of early nationalists➤ Role of literature and news-media in freedom struggle➤ Intensification of nationalist movement➤ Home Rule League➤ Militants and Revolutionaries➤ Gadar movement
LECTURE-1920, 21 & 22	<ul style="list-style-type: none">• Indian Freedom Struggle Under Gandhi<ul style="list-style-type: none">➤ Gandhi in South Africa➤ Non- cooperation Movement➤ Civil Disobedience Movement➤ Round Table Conference➤ Poona Pact➤ 1939 Tripuri Session➤ August Offer➤ Individual Satyagraha 1940-41➤ Quit India Movement➤ British Official response to national movement
TEST- 9, 10 & 11	CODE- MI02, MI03 & MI04
LECTURE-23	<ul style="list-style-type: none">• Struggle by the Masses Trade union movement in India<ul style="list-style-type: none">➤ Peasant movements in modern India➤ The states people's movements➤ Socialists and left bloc in congress➤ Indian National Army➤ Naval mutiny of 1946



LECTURE-24

- **Partition of India**
 - Rise and growth of communalism
 - Partition of India and attainment of freedom
 - Wavell Plan
 - Cabinet Mission Plan
 - Mountbatten Plan

TEST- 12

CODE- MI05

WORLD HISTORY

LECTURE-25

- **Industrial Revolution**
 - Decline of feudalism
 - Beginning of Renaissance
 - Pre-industrial Europe
 - Agricultural Revolution
 - Factors that led to industrial revolution
 - Impact of industrial revolution
- **French Revolution**
 - Causes
 - The revolution in France
 - France under Napoleon
 - Impact of Revolution
 - Significance of Revolution
- **Emergence of USA**
 - Foundation of American Colonies
 - The Independence of United States of America
 - The American Revolutionary War
 - What was the impact of American Revolution?
 - Political Effects of the Revolution
 - How did the American Revolution influence the French Revolution?
 - US Civil War
 - Impact of Civil War on USA
 - Global Impact of US Civil War
 - Impact on India
- Nationalism in Europe
 - Rise of the nation- state system
 - Unification of Italy
 - Unification of Germany
- Colonialism and Imperialism
 - Colonialism
 - The age of Imperialism (1870-1914)
 - Imperialism in Asia
 - Analysis of Colonialism



LECTURE-26	<ul style="list-style-type: none">• World War-I<ul style="list-style-type: none">➤ Major causes of the war➤ Course of the war➤ Analysis of major events of the war➤ Consequences of World War I➤ Aftermath of World War I➤ League of Nations• Russian Revolution<ul style="list-style-type: none">➤ Major events in pre-revolution Russia➤ Causes➤ Course of Revolution➤ Consequences➤ Aftermath of the war➤ Post-Lenin Russia• Inter-War Years (1919 To 1939)<ul style="list-style-type: none">➤ The Great Depression➤ The Great Depression- an economic perspective➤ Rise of Fascism in Italy➤ Rise of Nazism in Germany➤ Soviet Union (USSR)• World War- II<ul style="list-style-type: none">➤ Foundations of the war➤ Course of the war➤ Aftermath of war➤ Analysis of the war➤ Decolonization phase
TEST- 13	CODE- WH01
ART & CULTURE	
LECTURE-27	<ul style="list-style-type: none">• Palaeolithic art (cave Architecture)• Art & culture during Indus Valley civilization• Religion and Indian philosophy• Architecture and sculpture Since Mauryan age
LECTURE-28	<ul style="list-style-type: none">• Drama/theatre• Puppet forms of India• Indian pottery
TEST- 14	CODE- AC01
LECTURE-29	<ul style="list-style-type: none">• Indian paintings• Classical forms of dance &Folk dance forms• Classical music &Musical instruments
LECTURE-30	<ul style="list-style-type: none">• Indian literature• Government institutions related to art and culture• Culture and social change• UNESCO sites and GI tags
TEST- 15	CODE- AC02



PHYSICAL GEOGRAPHY

LECTURE -1

- The Universe & its formation theories.
- The Solar System
- Latitude & Important latitudes (from North to South)
- Longitude
- Standard Time and Greenwich Mean Time & International Date Line
- Motions of the Earth and their effects
- Solstice & Equinox



**LECTURE
-2 & 3**

- DOMAINS OF THE EARTH-hydrosphere, lithosphere, atmosphere & biosphere
- Continents and Ocean basins
- Sources of Information Of the Earth's Interior
- Division of Earth's Interior- The Crust, The Mantle & The Core
- Earthquake
 - Measurement of earthquake
 - Earthquake waves-Body Waves & Surface Waves
 - Shadow Zones
 - Types of earthquakes
- Volcanoes
 - Major types of Volcanoes
 - Intrusive Volcanic Landforms
- Minerals
- Rocks and its types
 - Igneous Rocks
 - Sedimentary Rocks
 - Metamorphic Rocks
 - Rock Cycle

TEST- 1

CODE- PHG01

**LECTURE
-4**

- Continental Drift Theory & Evidence supporting Continental Drift Theory
- Forces for continental drift
- Convectional current theory
- Abyssal Plains
- Distribution of Volcanoes and Earthquakes
- Concept of sea floor spreading
- Plate Tectonics
- Movement Of Indian Plate
- Evolution Of Landforms
- Earth Movements
- Endogenic Forces
- Exogenic Forces
- Landforms created by the action of Running Water & the action of Groundwater
- Landforms created by the action of Glacier
- Landforms created by the action of Wind
- Mountains and types of Mountains
- Plateau & Plains



LECTURE -5	<ul style="list-style-type: none">• Atmosphere & its Composition• Structure of the Atmosphere-Troposphere, Stratosphere, Mesosphere, Thermosphere & Exosphere• Solar Radiation<ul style="list-style-type: none">➤ Factors influencing Insolation on Earth➤ Spatial Distribution of Insolation at the Earth's Surface➤ Heating and Cooling of Atmosphere<ul style="list-style-type: none">✓ Conduction✓ Convection✓ Advection• Terrestrial radiation• Heat Budget and Energy Balance• Factors affecting Temperature Distribution
TEST- 2 CODE- PHG02	
LECTURE -6	<ul style="list-style-type: none">• Atmospheric Pressure• Vertical variation of Pressure & Horizontal distribution of Pressure• Global Pressure Belts• Factors affecting the velocity and direction of the wind• Pressure Gradient Force• Frictional Force & Coriolis Force• Pressure and Wind• General circulation of the atmosphere• Movement of the planetary winds• Seasonal Wind & Local Winds• Air Masses• Fronts- Cold Front and Warm Front• Cyclones -Tropical Cyclones, Extra Tropical Cyclone & Thunderstorms and Tornadoes
LECTURE -7	<ul style="list-style-type: none">• Humidity- absolute humidity & relative humidity• Evaporation and Condensation• Clouds and their type• Precipitation and its type• Types of rainfall• World Distribution of Rainfall
TEST- 3 CODE- PHG03	



LECTURE -8	<ul style="list-style-type: none">• Hydrological Cycle• Relief of the Ocean Floor- The Continental Shelf , The Continental Slope, The Deep Sea Plain & The Oceanic Deeps or Trenches• Minor Relief Features<ul style="list-style-type: none">➤ Mid-Oceanic Ridges➤ Seamount , Submarine Canyons , Guyots➤ Atoll• Horizontal and Vertical Distribution of Temperature• Salinity of Ocean Waters & Factors affecting ocean salinity<ul style="list-style-type: none">➤ Waves➤ Tides & Types of Tides• Ocean Currents & Types of Ocean Currents• Forces effect Ocean currents Primary forces(setting issue) & Secondary forces
LECTURE -9 & 10	<ul style="list-style-type: none">• Classification of climate<ul style="list-style-type: none">➤ Koppen's Scheme of classification➤ Climate change➤ Global Warming➤ Greenhouse Gases (GHGs)• Natural vegetation<ul style="list-style-type: none">➤ Factors affecting natural vegetation• Types of Natural Vegetation• Types of Forests<ul style="list-style-type: none">➤ Tropical Evergreen Forests➤ Tropical Deciduous Forests➤ Temperate Evergreen Forests➤ Temperate Deciduous Forests➤ Mediterranean Vegetation➤ Coniferous Forests• Type of Grasslands<ul style="list-style-type: none">➤ Thorny bushes➤ Tundra
TEST- 4 CODE- PHG04	
INDIAN GEOGRAPHY	
LECTURE -11	<ul style="list-style-type: none">• LOCATION• SIZE• INDIA AND THE WORLD• INDIA'S NEIGHBOURS



LECTURE -12& 13	<ul style="list-style-type: none">• Geological divisions.<ul style="list-style-type: none">➤ The Himalayas and other Peninsular Mountains➤ Indo-Ganga-Brahmaputra Plain• Physiography<ul style="list-style-type: none">➤ The Northern Plain➤ The Peninsular Plateau<ul style="list-style-type: none">✓ The Deccan Plateau✓ Western Ghat✓ Eastern Ghat✓ The Central Highlands➤ The Indian Desert➤ The Coastal Plains➤ The Islands
LECTURE -14	<ul style="list-style-type: none">• Drainage system & Important Drainage Patterns• Indian drainage System and its Classification• Evolution of the Himalayan Drainage• The River Systems of the Himalayan Drainage<ul style="list-style-type: none">➤ The Indus River System➤ The Ganga River System➤ The Brahmaputra River System• The Peninsular Drainage System<ul style="list-style-type: none">➤ Evolution of Peninsular Drainage System➤ River Systems of the Peninsular Drainage<ul style="list-style-type: none">✓ East Flowing River✓ West-Flowing Rivers• Comparison between Himalayan and Peninsular Rivers
TEST- 5 CODE- ING01	
LECTURE -15	<ul style="list-style-type: none">• Climate & Weather• Factors influencing the climate of India including impact of Monsoon Winds , Westerly Jet stream , Easterly Jet , Western Disturbances and Tropical Cyclones , El - Nino Effect Southern Oscillation & Role of ITCZ etc.• Concept Of Monsoon• Cycle of Seasons in India<ul style="list-style-type: none">➤ The cold weather season➤ The Hot Weather Season➤ The advancing monsoon season➤ Retreating / Post Monsoon (The Transition Season)➤ Distribution Of Rainfall
LECTURE -16	<ul style="list-style-type: none">• Soil & Components of soil• Classification of Soil- Alluvial soil, Black soil, Red and Yellow soils, Laterite soil, Arid soil, Saline soil, Peaty soil & Forest soil• Soil Degradation<ul style="list-style-type: none">➤ Soil Erosion -Causes , Factors affecting & impact➤ Soil conservation methods

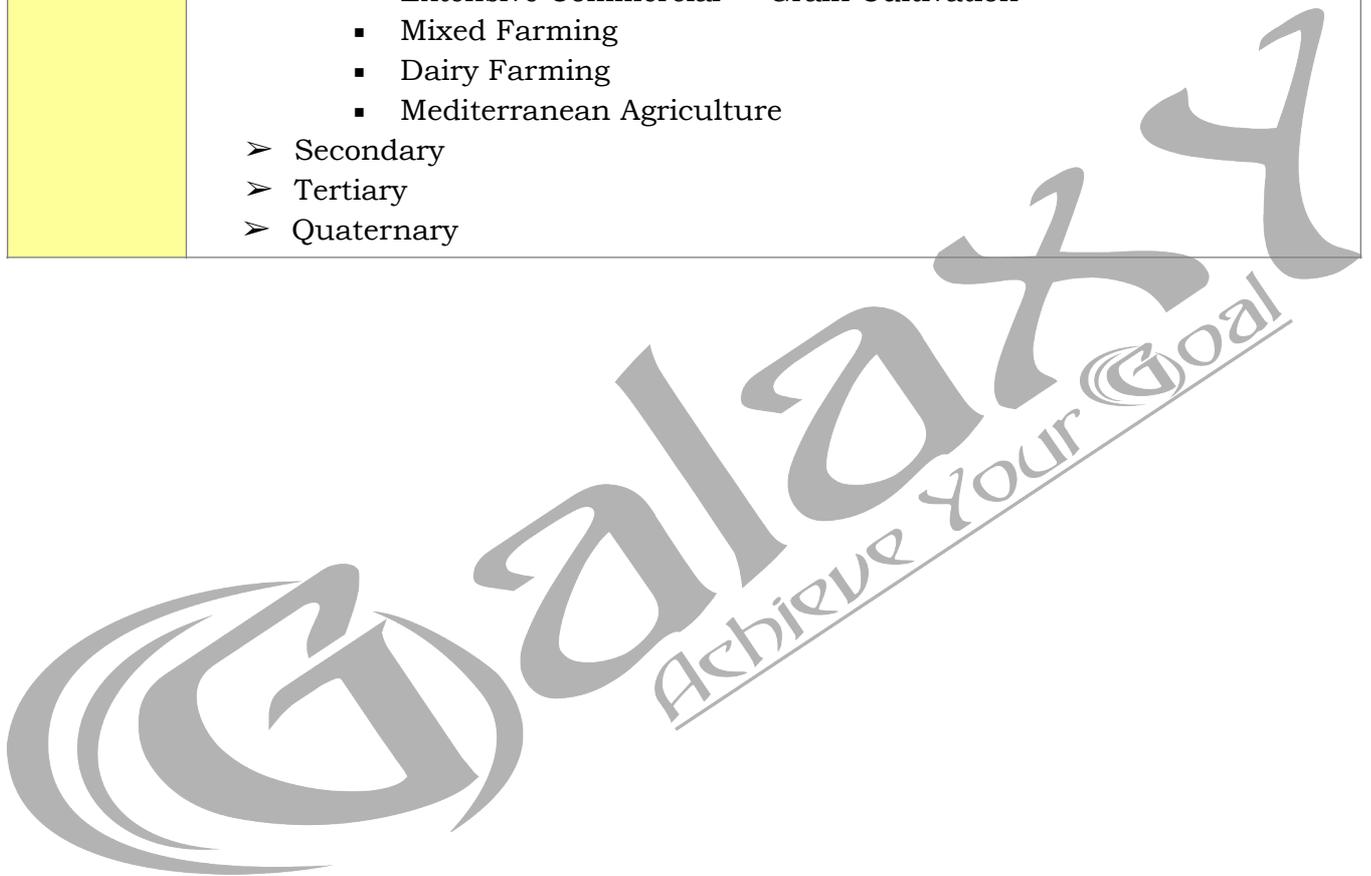


<p>LECTURE -17</p>	<ul style="list-style-type: none">• Natural Vegetation• Major factors influence Natural Vegetation• Indian Forests<ul style="list-style-type: none">➤ Tropical Evergreen and Semi-Evergreen Forests➤ Tropical Evergreen Forests➤ Semi Evergreen Forests➤ Tropical Deciduous Forests➤ Moist Deciduous Forests➤ Dry Deciduous Forests➤ Tropical Thorn Forests➤ Montane Forests➤ The Southern Mountain Forests➤ Littoral and Swamp Forests• Forest Conservation in India• Forest cover in India<ul style="list-style-type: none">➤ The National Forest Policy• Social Forestry<ul style="list-style-type: none">➤ Urban Forestry➤ Rural Forestry<ul style="list-style-type: none">✓ Agro-forestry✓ Community Forestry➤ Farm Forestry• Wild Life and Wild Life Conservation in India<ul style="list-style-type: none">➤ Biosphere Reserve• Disaster Management• Disaster & Classification of Disaster• Earthquakes<ul style="list-style-type: none">➤ Earthquake Hazard Zones in India➤ Effects of Earthquakes➤ Earthquake Hazard Mitigation• Tsunami• Tropical cyclone<ul style="list-style-type: none">➤ Consequences of Tropical Cyclones• Floods- Consequences and Control of floods• Droughts- Types of Droughts , Consequences and Mitigation• Landslides<ul style="list-style-type: none">➤ Disaster Management
<p style="text-align: center;">TEST- 6 CODE- ING02</p>	
<p style="text-align: center;">HUMAN GEOGRAPHY</p>	
<p>LECTURE - 18</p>	<ul style="list-style-type: none">• Nature of Human Geography<ul style="list-style-type: none">➤ Environmental Determinism• Fields and Sub-fields of Human Geography<ul style="list-style-type: none">➤ Social Geography➤ Urban Geography➤ Political Geography➤ Population Geography ➤ Settlement Geography ➤ Economic Geography



**LECTURE
-19**

- Human Development
- Difference between Growth & Development
- Approaches to Human Development
- Measuring Human Development – Human Development Index
- Human Activities
- Classification of Human Activities
 - Primary
 - ✓ Types of agricultural systems
 - Subsistence Agriculture
 - Plantation Agriculture
 - Extensive Commercial Grain Cultivation
 - Mixed Farming
 - Dairy Farming
 - Mediterranean Agriculture
 - Secondary
 - Tertiary
 - Quaternary





**LECTURE
-20**

- Transport and Communication
- Transport
- Modes of Transportation
- **Land Transport**
 - Road Transport- Major highways of the world, Road Transport Of India & Classification Of Road Transport
 - Importance of Road Transport vis-à-vis rail transport
 - Railways-Trans-continental Railways, Trans-Siberian Railways, Trans-Canadian Railways etc
 - Railways in India
 - ✓ Three categories Indian Railways
 - Broad gauge
 - Metre gauge
 - Narrow gauge
- Water Transport
 - Sea Routes- Important Sea Routes of the world
 - Inland Waterways of World & India
 - Important Inland waterways of the world
 - National Waterways
 - ✓ Coastal Shipping
 - The Suez Canal
 - The Panama Canal
 - Important Ports of India
 - Important Projects such as Sagarmala Project, SetuBharatam project & Bharatmala Project
- **Air Transport**
 - Inter-continental Air Routes
 - Major Airports in India
- **Pipelines**
 - Important networks of pipeline of India
- **Communications (World & India)**
 - mode of communication
 - ✓ Satellite Communication
 - ✓ Cyber Space – Internet
- International Trade

TEST- 7

CODE- HG01



<p>LECTURE -21</p>	<ul style="list-style-type: none">• Land Resources And Agriculture<ul style="list-style-type: none">➤ Land Use and the land-use categories➤ Agricultural Land Uses in India➤ Cropping Seasons in India➤ Types of farming<ul style="list-style-type: none">✓ Irrigated✓ Rainfed➤ Foodgrains➤ Cereals-Rice &Wheat➤ Coarse Cereals- Jowar, Bajra & Maize➤ Pulses- Gram, Tur (Arhar)➤ Oilseeds➤ Fibre Crops- Cotton & Jute➤ Other Crops- Sugarcane, Tea & Coffee➤ Agricultural Development in India and Strategy➤ Problems of Indian Agriculture• Water Resources<ul style="list-style-type: none">➤ Types of Water Resources-Surface Water Resources, Groundwater Resources & Lagoons and Backwaters➤ Irrigation➤ Generation of electricity➤ Emerging Water Problems➤ Deterioration of Water Quality➤ Water Conservation and Management➤ Prevention of water pollution➤ Recycle and Reuse of water➤ Watershed Management➤ Rainwater Harvesting
<p>LECTURE -22</p>	<ul style="list-style-type: none">• Mineral And Energy Resources<ul style="list-style-type: none">➤ Minerals & Classification of minerals➤ Distribution of Minerals in India➤ Important minerals found in India their distribution➤ Ferrous Minerals-Iron Ore & Manganese➤ Non-ferrous minerals- Bauxite- Copper➤ Non-Metallic Minerals- Mica➤ Rock Minerals- Limestone• Energy Resources<ul style="list-style-type: none">➤ Classified of Energy Resources➤ Conventional- Coal, Petroleum & Natural Gas➤ Non-conventional sources- Nuclear/Atomic Energy sources, Solar Energy, Wind Energy, Tidal and Wave Energy, Geothermal Energy & Bio-energy➤ Conservation of Mineral Resources



**LECTURE
-23**

- International Trade
- Basis of International Trade
 - Difference in National Resources
 - Population and cultural factors
 - Stage of economic development
 - Extent of foreign investment
 - Transport
- Balance of Trade and Balance of Payments
- World Trade Organisation
- Regional Trade Blocs
- Manufacturing Industries
 - Classification of Manufacturing Industries
 - Importance of manufacturing industries
 - Location of industries
 - factors influence the location of industries
- Industrial Policy
- Major Industries
 - Iron and Steel Industry
 - Cotton Textile Industry
 - Sugar Industry
 - Petrochemical Industries
 - Knowledge based industries
- Liberalisation, Privatisation, Globalisation (LPG) and Industrial Development in India
- Industrial Regions in India
- Industrial Districts

TEST- 8

CODE- HG02

**LECTURE
-24**

- **World Population- World & India**
 - Population Distribution
 - Factors affecting Population
 - Density of population
 - Population Growth-World & India
 - ✓ Four distinct phases of growth of population in India
- Components of Population Change
- Demographic Transition
- Adolescent
- Population Composition
 - population pyramids
 - Rural Urban Composition
 - Literacy
 - Composition of Working Population
 - Population Control Measures



**LECTURE
-25**

- Human Settlements -World & India
 - Temporary Settlements
 - Permanent Settlements
 - Classification of Settlements
- Factors affecting the location of rural settlements
- Patterns of rural settlements
- Rural settlements in India
- Types
 - Clustered Settlement
 - Semi-Clustered Settlements
 - Hamleted Settlements
 - Dispersed Settlements
- Problems of Rural Settlements
- Urban Settlements
 - classification of urban settlements
- Types of Urban Settlements
 - Town
 - ✓ Classification of Towns
 - Administrative towns
 - Trading and Commercial Towns
 - Cultural Towns
 - City
 - Conurbation
 - Megapolis/Megacity
 - Million City
- Evolution of Towns in India
- Problems of Urban Settlements
- Human Development in India
- Indicators of HDI
- Social problems like crimes, terrorism, and war and political factors

TEST- 9

CODE- HG03

GS NCERT SESSION PLAN

S. No.

Polity



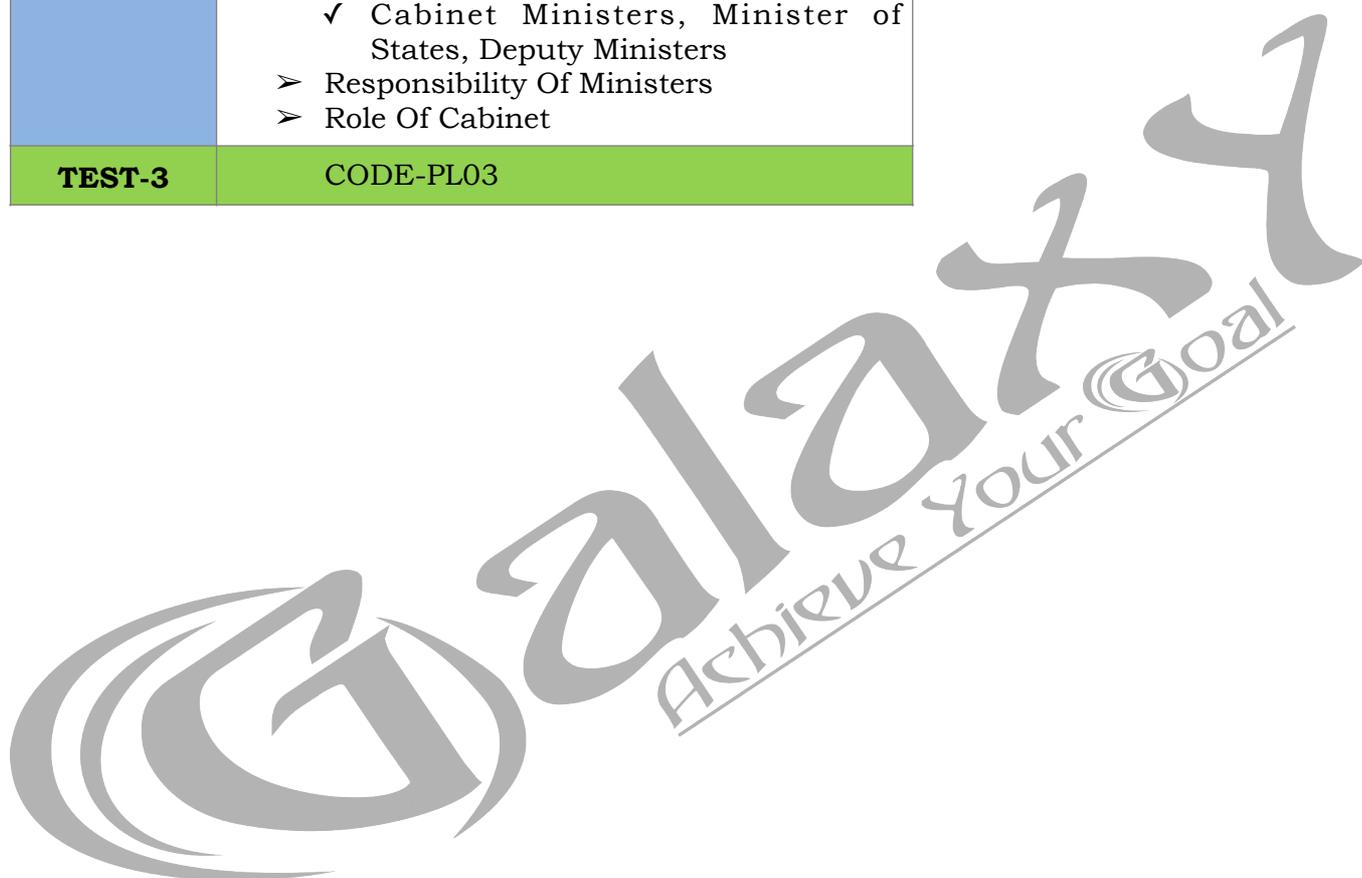
Lecture - 1	<ul style="list-style-type: none">· INTRODUCTION OF POLITICAL SCIENCE & POLITICS<ul style="list-style-type: none">➤ Distinction between Political Science and Politics• CITIZENS AND GOVERNMENT• STATE, SOCIETY, GOVERNMENT & NATION<ul style="list-style-type: none">➤ Difference between State and Society➤ Difference between State and Government• NATION• TYPES OF POLITICAL SYSTEM<ul style="list-style-type: none">➤ Democracy<ul style="list-style-type: none">✓ Types of Democracy<ul style="list-style-type: none">▪ Direct Democracy, Indirect Democracy✓ Some available devices of direct democracy<ul style="list-style-type: none">▪ Referendum, Initiative, Recall, Plebiscite• FORMS OF GOVERNMENT<ul style="list-style-type: none">➤ Unitary, Federal, Parliamentary, Presidential
Lecture - 2	<ul style="list-style-type: none">• CONSTITUTION - what, why & how?• TYPES OF CONSTITUTION<ul style="list-style-type: none">➤ Written, Unwritten• VARIOUS RULING SYSTEMS OF THE WORLD<ul style="list-style-type: none">➤ Monarchy, Autocracy, feudalism, Federalism, Republic, Communalism and Democracy• Historical background of Indian Constitution<ul style="list-style-type: none">➤ Company Rule (1773-1858) & Crown Rule (1858-1947)• FRAMING OF INDIAN CONSTITUTION<ul style="list-style-type: none">➤ Constituent Assembly- Composition, Drafting Committee➤ Sources of Indian constitution➤ Salient features of the Constitution
Lecture - 3	<ul style="list-style-type: none">• Preamble• KEY WORDS IN THE PREAMBLE<ul style="list-style-type: none">➤ Sovereign, Socialist, Secular, Democratic, Republic, Justice, Liberty, Equality and Fraternity• Significance & Amendability Of The Preamble
TEST-1	CODE-PL01



Lecture - 4	<ul style="list-style-type: none"> · UNION AND ITS TERRITORY <ul style="list-style-type: none"> ➤ Union Of States (Article 1-4) • Re-Organisation Of States <ul style="list-style-type: none"> ➤ D h a r Commission , J V P Committee, Fazl Ali Commission • CITIZENSHIP (Article 5-11) <ul style="list-style-type: none"> ➤ Acquisition Of Citizenship, Loss Of Citizenship ➤ Single Citizenship • Comparison of Non Resident Indian (NRI), Person of Indian Origin (PIO) & Overseas Citizen of India (OCI) Cardholder
Lecture - 5&6	<ul style="list-style-type: none"> · FUNDAMENTAL RIGHTS (Article 12 - 35) <ul style="list-style-type: none"> ➤ Features Of Fundamental Rights ➤ Right To Equality <ul style="list-style-type: none"> ✓ Equality Before Law And Equal Protection Of Laws ➤ Right To Freedom ➤ Protection In Respect Of Conviction For Offences <ul style="list-style-type: none"> ✓ No <i>ex-post-facto</i> law, No double jeopardy , No self-incrimination ➤ Protection Of Life And Personal Liberty <ul style="list-style-type: none"> ✓ Right To Education ➤ Right Against Exploitation ➤ Right To Freedom Of Religion ➤ Culture And Education Rights
Lecture - 7&8	<ul style="list-style-type: none"> • DIRECTIVE PRINCIPLES OF STATE POLICY (DPSP) <ul style="list-style-type: none"> ➤ Features, Classification, Implementation and Criticism of DPSP. ➤ Conflict between fundamental rights & Directive Principals. • FUNDAMENTAL DUTIES (FD)
TEST-2	CODE-PL02
Lecture - 9	<ul style="list-style-type: none"> · PRESIDENT <ul style="list-style-type: none"> ➤ Election Of The President <ul style="list-style-type: none"> ✓ Electoral College, Election Process ➤ President-Qualification, Oath and Powers ➤ Impeachment Of President ➤ Powers And Functions Of The President <ul style="list-style-type: none"> ✓ Executive Powers, Legislative Powers, Financial Powers, Military Powers, Emergency Powers, Veto Powers, Ordinance Making Power , Pardoning Powers • ATTORNEY GENERAL OF INDIA • COMPTROLLER AND AUDITOR GENERAL OF INDIA



Lecture – 10	<ul style="list-style-type: none">• THE VICE-PRESIDENT<ul style="list-style-type: none">➤ Election Of The VICE- President➤ VicePresident-Qualification, Oath and Powers➤ Powers And Functions• THE PRIME MINISTER<ul style="list-style-type: none">➤ Appointment Of The Prime Minister➤ Powers And Functions Of The Prime Minister• CENTRAL COUNCIL OF MINISTERS<ul style="list-style-type: none">➤ Composition Of The Council Of Ministers<ul style="list-style-type: none">✓ Cabinet Ministers, Minister of States, Deputy Ministers➤ Responsibility Of Ministers➤ Role Of Cabinet
TEST-3	CODE-PL03





Lecture – 11&12	<ul style="list-style-type: none">• PARLIAMENT<ul style="list-style-type: none">➤ Parliament and its houses<ul style="list-style-type: none">✓ Rajyasabha, Loksabha➤ Membership Of Parliament➤ Speaker Of LokSabha<ul style="list-style-type: none">✓ Powers & Functions Of Speaker, Protem Speaker✓ Deputy Speaker Of Loksabha, Leader Of The House and Opposition➤ Chairman Of RajyaSabha<ul style="list-style-type: none">✓ Deputy Chairman Of RajyaSabha➤ Language In Parliament➤ Sessions Of Parliament➤ Adjournment Of Parliament• MOTIONS IN PARLIAMENT<ul style="list-style-type: none">➤ Closure Motion, Adjournment Motion, No-Confidence Motion, Motion Of Thanks, Censure Motion, No-Confidence Motion• BILLS IN PARLIAMENT<ul style="list-style-type: none">➤ Ordinary bills, Money bills, Financial bills, Constitution amendment bills• JOINT SITTING OF TWO HOUSES• BUDGET• MOTION<ul style="list-style-type: none">➤ Cut Motion, Policy Cut Motion, Economy Cut Motion, Token Cut Motion• GRANT<ul style="list-style-type: none">➤ Supplementary Grant, Additional Grant, Excess Grant, Vote Of Credit, Exceptional Grant, Token Grant• FUNDS<ul style="list-style-type: none">➤ Consolidated Fund Of India, Public Account Of India, Contingency Fund Of India• PARLIAMENTARY COMMITTEES<ul style="list-style-type: none">➤ Standing Committees, Ad Hoc Committees, Public Accounts Committee, Estimates Committee, Committee On Public Undertakings
Lecture – 13	<ul style="list-style-type: none">• CONSTITUTION AMENDMENT BILLS<ul style="list-style-type: none">➤ Procedure For Amendment• BASIC STRUCTURE OF THE CONSTITUTION<ul style="list-style-type: none">➤ Name Of The Case (Year), Elements Of The Basic Structure (As Declared By The Supreme Court)
TEST-4	CODE-PL04



Lecture – 14	<ul style="list-style-type: none">• GOVERNOR<ul style="list-style-type: none">➤ Powers And Functions Of Governor<ul style="list-style-type: none">✓ Executive powers, Legislative powers, Financial powers, Judicial powers➤ Comparing Ordinance-Making Power Of President And Governor➤ Comparing Pardoning Powers Of President And Governor• State Government<ul style="list-style-type: none">➤ Chief Minister- Appointment, Removal, Oath, Tenure And Resignation➤ State Council of Ministers• STATE LEGISLATURE<ul style="list-style-type: none">➤ Legislative Assembly, Legislative Council• SPEAKER OF LEGISLATIVE ASSEMBLY• CHAIRMAN OF LEGISLATIVE COUNCIL
Lecture – 15	<ul style="list-style-type: none">• CENTRE-STATE RELATIONS<ul style="list-style-type: none">✓ Legislative relations, Administrative relations, Financial relations.• INTER STATE COUNCIL• CENTRE STATE RELATION DURING EMERGENCIES• DEVELOPMENTS IN CENTRE-STATE RELATIONS
Lecture – 16	<ul style="list-style-type: none">• JUDICIAL SYSTEM OF INDIA<ul style="list-style-type: none">➤ Structure Of The Judiciary• Supreme Court<ul style="list-style-type: none">➤ Strength Of Supreme Court Judges➤ Qualifications, Appointment, Oath, Tenure, Salary And Impeachment Or Removal➤ Jurisdiction Of Supreme Court<ul style="list-style-type: none">✓ Original Jurisdiction, Writ Jurisdiction, Appellate Jurisdiction, Advisory Jurisdiction• HIGH COURT• SUBORDINATE COURTS• NATIONAL LEGAL SERVICES AUTHORITY<ul style="list-style-type: none">➤ LokAdalats, Family Courts, Gram Nyayalayas• JUDICIAL REVIEW, JUDICIAL ACTIVISM, JUDICIAL RESTRAINT, PUBLIC INTEREST LITIGATION
TEST-5	CODE-PL05



<p>Lecture - 17</p>	<ul style="list-style-type: none"> • LOCAL GOVERNMENT <ul style="list-style-type: none"> ➤ Growth Of Local Government In India • PANCHAYATI RAJ <ul style="list-style-type: none"> ➤ Three-Tier System ➤ Evolution Of Panchayati Raj <ul style="list-style-type: none"> ✓ BalwantRai Mehta Committee, Ashok Mehta Committee, G V K Rao Committee, L M Singhvi Committee, Thungon Committee, Gadgil Committee • GRAM SABHA • THE MUNICIPALITIES <ul style="list-style-type: none"> ➤ Three Types Of Municipalities
<p>Lecture - 18</p>	<ul style="list-style-type: none"> • EMERGENCY PROVISIONS <ul style="list-style-type: none"> ➤ National Emergency <ul style="list-style-type: none"> ✓ Parliamentary Approval, Duration And Revocation Of Proclamation ✓ Effects Of National Emergency ✓ Effect On The Fundamental Rights ➤ President's Rule ➤ Financial Emergency
<p>Lecture - 19</p>	<ul style="list-style-type: none"> • ELECTION MACHINERY <ul style="list-style-type: none"> ➤ Election Commission Of India <ul style="list-style-type: none"> ✓ Chief Electoral Officer , District Election Officer ,Returning Officer , Presiding Officer • ELECTION PROCESS • INDEPENDENT ELECTION COMMISSION • ELECTORAL REFORMS <ul style="list-style-type: none"> ➤ Introduction Of Vvpat, Introduction Of Nota Option, First Past The Post System
<p>TSET-6</p>	<p>CODE-PL06</p>
<p>Lecture - 20</p>	<ul style="list-style-type: none"> • Constitutional Bodies <ul style="list-style-type: none"> ➤ Union Public Service Commission ➤ State Public Service Commission ➤ Joint State Public Service Commission ➤ National Commission For Sc ➤ National Commission For St ➤ Special Officer For Linguistic Minorities



Lecture - 21	<ul style="list-style-type: none">• Non Constitutional Bodies<ul style="list-style-type: none">➤ NitiAayog Composition Objectives➤ Erstwhile Planning Commission➤ The National Development Council➤ National Human Right Commission➤ State Human Rights Commission➤ Human Rights Courts➤ Central Information Commission➤ State Information Commission➤ Central Vigilance Commission➤ Whistle Blowers Act (2011)➤ Central Bureau Of Investigation➤ Lokpal
Lecture - 22	<ul style="list-style-type: none">• OTHER CONSTITUTIONAL DIMENSIONS<ul style="list-style-type: none">➤ Co-Operative Societies➤ Official Language➤ Classical Language Status➤ Tribunals➤ Rights And Liabilities Of The Government➤ Authoritative Text Of The Constitution In Hindi Language➤ Jammu And Kashmir Status (Art. 370)➤ Important Features Of Special Status➤ Pressure Groups And Movements
TEST-7	CODE-PL07

S. No.	ECONOMICS	Polity
	MICRO ECONOMICS	



**LECTUR
E-1& 2**

Introduction

- Economics Vs Economy
- Types of Economics
 - Microeconomics
 - Positive And Normative
- Central problems of Economy
 - Production Possibility Curve,**
 - Opportunity Cost,
- Types of Economics System
 - Centrally Planned Economy
 - Market Economy
 - Mixed Economy
- Sectors of Economy
 - Primary, Secondary And
 - Tertiary Sectors

Consumer behaviour and Demand

- Utility
 - Cardinal & Ordinal Utility
 - Analysis
 - Indifference Curve**
 - Consumers Budget** & its
 - Equilibrium

Demand

- Meaning & Law of Demand
- Factors of Demand
- **Demand Curve**
- Movement And Shift in Demand Curve
- Elasticity of Demand
- Types of Goods
 - Normal,
 - Inferior, Luxury, Complementar y,
 - Substitute & Giffin Goods



LECTUR E-2& 3	<p>Production, Supply and Cost</p> <ul style="list-style-type: none">➤ Concept of Production Function: Short Run And Long Run➤ Total Product, Average Product and Marginal Product➤ Law of Variable proportions➤ Producer's Equilibrium MR-MC Approach <p>Supply</p> <ul style="list-style-type: none">➤ Meaning and Law of Supply➤ Supply Curve, Supply Schedule and its Function➤ Movement And Shift in Supply Curve <p>Cost</p> <ul style="list-style-type: none">➤ Concept and its Types (Explicit & Implicit)➤ Total Cost, Average Cost And Marginal Cost and their Relations➤ Revenue and its Forms
LECTUR E-4	<p>Market Structure And Price Determination</p> <ul style="list-style-type: none">➤ Concept➤ Forms of Market- Perfect Competition, Monopoly, Monopolistic, Duopoly, Monoposony & Oligopoly➤ Firms Revenue Curve in Different Markets➤ Market Equilibrium Under Perfect Competition➤ Effects of Shifts In Demand And supply➤ Simple Application Tools for Demand Supply Curves
TEST- 1 CODE- MICE01	
MACRO ECONOMICS/INDIAN ECONOMY	



**LECTUR
E-5 &6**

Indian economy on the eve of independence

- Indian Economy (1950-1990)
- Goals of Five Year Plans
- Planning Commission, National Development Council AND NITI Aayog
- Economic Reforms Since 1991
- Economic Crisis and its causes
- Liberalisation, Privatisation and Globalisation
- New Economic Policy (NEP)
- World Trade Organisation (WTO)

National Income Accounting

- Meaning
- Circular flow of National Income
- Methods of calculating Income
- The product or value-added method
- Expenditure Method
- Income Method
- Factor cost, Basic Prices and Market Prices
- GDP, (GNP), (NNP), Personal Income And Disposable Income
- GDP Deflator
- The Multiplier Mechanism
- Paradox of Thrift
- GDP and Welfare
- Taxes , its Types & Implications on People And the Economy, Laffer Curve, Tax GDP ratio



LECTUR E-7& 8	<p>Inflation</p> <ul style="list-style-type: none">➤ Meaning& Base Effect in Inflation➤ Causes➤ Core Inflation v/s Headline Inflation➤ Cost push inflation v/s Demand pull Inflation➤ Relation between Growth And Inflation: Phillips Curve➤ Impacts➤ Measures <p>Money and Banking</p> <p>Money</p> <ul style="list-style-type: none">➤ Money & its Functions➤ Stock of Money- M0,M1,M2,M3 &M4➤ Money Multiplier <p>Banking</p> <ul style="list-style-type: none">➤ Banking Structure➤ Money Creation By➤ Banking Reforms by the Commercial Banking System➤ Reserve Bank of India Control➤ Non-Performing Asset(NPA)➤ Financial Inclusion-Micro Finance➤ Label ATMs➤ Recent Development
TEST- 2 CODE- MACE01	
LECTUR E-9 & 10	<ul style="list-style-type: none">• Government Budget and the Economy<ul style="list-style-type: none">➤ History of Budget in India➤ Annual Financial Statement➤ Government Receipts & Expenditure and their Classification➤ Objectives of Government Budget➤ Balanced, Surplus and Deficit Budget etc.➤ Measures of Government Deficit<ul style="list-style-type: none">✓ Fiscal Policy✓ Gender Budget➤ FRBM Act 2003



LECTUR E-12 & 13	Balance of Payments <ul style="list-style-type: none">➤ Current Account and Capital Account➤ BOP-Surplus and Deficit➤ Autonomous and Accommodating Transactions➤ Foreign Exchange Market➤ Nominal exchange rate and Real exchange rate➤ Determination of the Exchange Rate in Free Market & Other Markets➤ Fixed, Flexible ,and Managed Floating➤ Factors effecting Exchange rate
	TEST- 3 CODE- MACE02
INDIAN ECONOMY	
LECTUR E-15	<ul style="list-style-type: none">• Poverty and Unemployment<ul style="list-style-type: none">➤ Meaning & Types of Poverty➤ Causes of poverty➤ Measuring Poverty in India (Consumption/Expenditure Method, Head Count Ratio)➤ Poverty Alleviation and programmesUnemployment<ul style="list-style-type: none">➤ Meaning➤ Causes and Types➤ Measurements➤ How to controlHuman Capital Formation in India<ul style="list-style-type: none">➤ Human Capital➤ Sources of Human Capital➤ Human Capital and Human Development
	TEST- 4 CODE- INE01



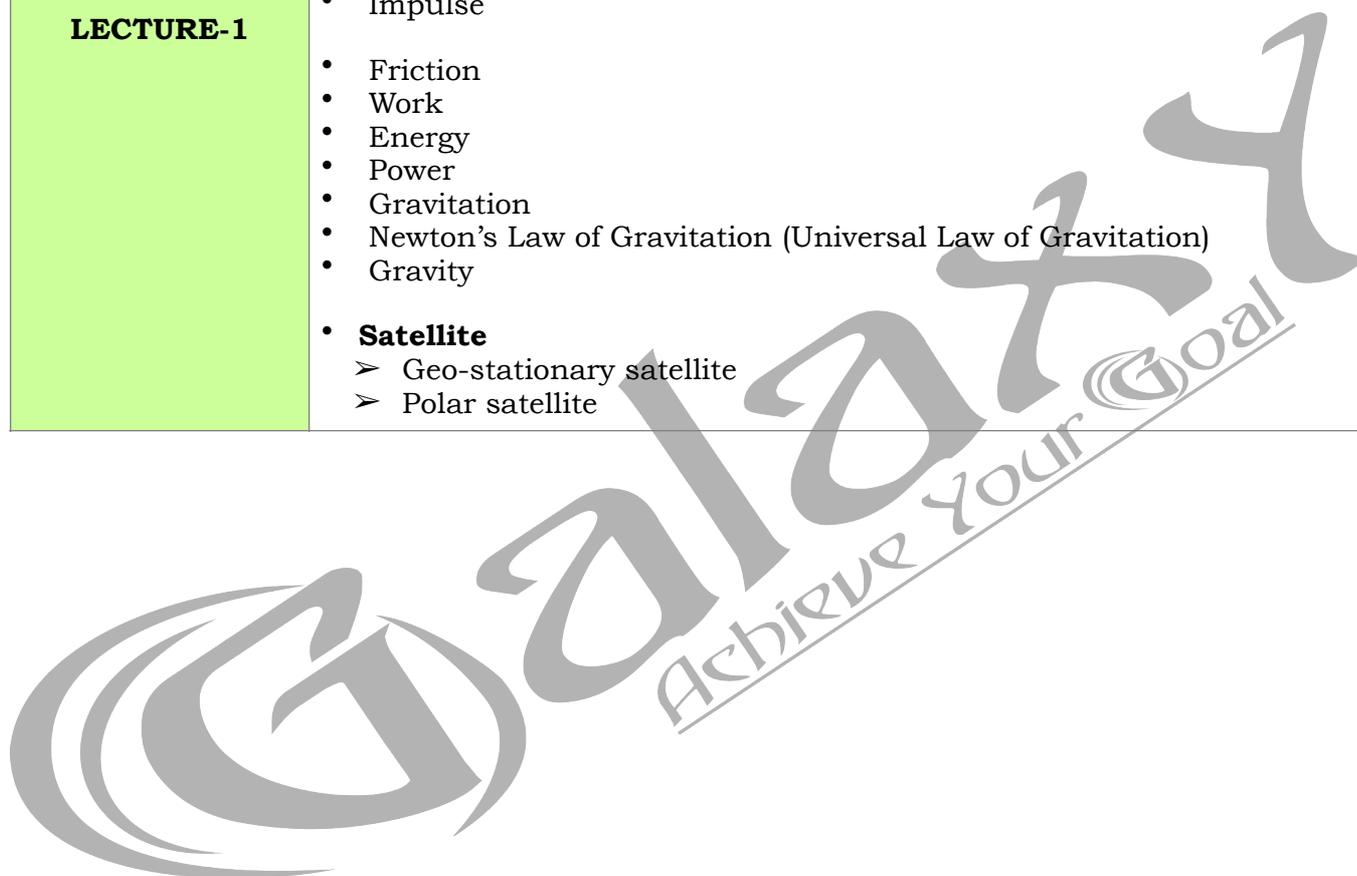
LECTUR E-16 & 17	Agriculture and Rural Development <ul style="list-style-type: none">➤ Introduction➤ Challenges➤ Green Revolutions➤ Food Security➤ Land Reforms➤ Agricultural Market System➤ Self Help Groups➤ Initiatives➤ Sustainable Development and Organic Farming
LECTUR E-20	Infrastructure <ul style="list-style-type: none">➤ Relevance of Infrastructure➤ state of Infrastructure in India Energy <ul style="list-style-type: none">➤ Consumption Pattern of Commercial Energy➤ Its Role in Economic Development Health <ul style="list-style-type: none">➤ Healthcare System in India➤ Indicators of Health and Health Infrastructure
LECTUR E-21	Sustainable Development <ul style="list-style-type: none">➤ Carrying capacity➤ Absorptive capacity➤ Population Explosion➤ Industrial Revolution➤ Opportunity cost Comparative Development Experiences of India and Its Neighbours <ul style="list-style-type: none">➤ Developmental strategies of India, Pakistan and China and their Strategies➤ Comparison of the developmental indicators of India, China and Pakistan➤ Indicators of Human Development 2015➤ Development Strategies
TEST- 5	CODE- INE02



PHYSICS

LECTURE-1

- **Units And Symbols**
- Scalar and Vector Quantities
- Motion
 - Rectilinear motion
 - Angular motion
 - Rotational motion
- Force
- Torque (or Moment of Force)
- Applications of Centripetal and Centrifugal forces
- Newton's Laws of Motion
- Impulse
- Friction
- Work
- Energy
- Power
- Gravitation
- Newton's Law of Gravitation (Universal Law of Gravitation)
- Gravity
- **Satellite**
 - Geo-stationary satellite
 - Polar satellite





LECTURE-2

- **Mechanical Properties of Solids**
 - Elasticity and Plasticity
 - Stress and Strain
 - Hooke's Law
 - Modulus of Elasticity
 - Young's Modulus of Elasticity
- **Mechanical Properties of Fluids**
 - Fluid Pressure
 - Atmospheric pressure
 - Pascal's Law Buoyancy
 - Archimedes' Principle
 - Applications of Archimedes Principle
 - Surface Tension
 - Capillarity
 - Flow of Fluid
 - Bernoulli's Theorem
 - Viscosity
 - Factors affecting Viscosity
 - Stoke's Law
 - Application of Stoke's Law
 - Terminal Velocity
- **THERMAL PROPERTIES OF MATTER**
 - Ideal-gas equation and Absolute temperature
 - Boyle's law
 - Charles' law
 - Kirchhoff's law
 - Black Body
 - Newton's Law of Cooling
- **THERMODYNAMICS**
 - Thermal equilibrium
 - Zeroth law of thermodynamics
 - First law of thermodynamics
 - Heat engines
 - Second law of thermodynamics
- **OSCILLATIONS**
 - Simple Harmonic Motion
- **WAVES**
 - Types of Waves
 - Types of Mechanical Waves
 - Sound Waves
 - Doppler Effect
 - Electromagnetic Waves



LECTURE-3

- **ELECTRICITY**
 - Charge
 - Coulomb's law
 - Electrolysis
 - Types of Electric Current
 - Electric Cell
 - Faraday's Laws of Electrolysis Ohm's law
 - Conductors, Resistors, Semiconductors and Insulators
 - Ammeter and Voltmeter
 - Heating Effect of Electricity
 - Electric Power
 - Capacitor
- **MAGNETISM**
 - Magnetic Field
 - Magnetism and Matter
 - Bar Magnet
 - Gauss's law
 - Magnetic properties of materials
 - Ferromagnetism
 - Diamagnetism
 - Paramagnetism
 - Magnetic Permeability
 - Magnetic Susceptibility and Retentivity
 - Permanent magnets and Electromagnets
 - Electromagnetic Induction
 - Faraday's law of Induction
 - Fleming's Right Hand Rule
 - Inductance
 - AC generator

TEST- 1

CODE- PHY01



LECTURE-4

- **OPTICS**
- **Light**
- ✓ Reflection of light
- ✓ Laws of Reflection
- ✓ Mirror
- ✓ Use of Spherical Mirrors
- ✓ Mirror Formula
- ✓ Law of Refraction
- ✓ Refractive Index

- ✓ Total Internal Reflection

- ✓ Spherical Lenses
- ✓ Lens Formula
- ✓ Power of a lens

- ✓ Dispersion of Light
- ✓ Creation of Rainbow

- ✓ Scattering of light

- ✓ Colours

- **Human Eye**
- Defects of Human Eye
- **Optical Instrument**
- The Microscope
- Telescope

LECTURE-5

- **DUAL NATURE OF RADIATION AND MATTER**
- Electron emission
- Einstein's photoelectric equation
- Wave nature of matter
- The heisenberg's uncertainty principle
- Atoms and nuclei
- **MODERN PHYSICS**
- Semiconductor
- Classification of metals, conductors and semiconductors
- Light emitting diode
- Solar cell
- Transistor
- **COMMUNICATION SYSTEMS**

TEST- 2

CODE- PHY02



S. No.	CHEMISTRY
Lecture - 1	<ul style="list-style-type: none">• BASIC CONCEPTS OF CHEMISTRY<ul style="list-style-type: none">➤ Matter and its states➤ Comparison between Solids, Liquids and Gases➤ Change of States of Matter➤ Sublimation➤ Evaporation➤ Particles of Matter➤ Classification of Matter➤ Properties of Matter and Their Measurement➤ Laws of Chemical Combinations<ul style="list-style-type: none">✓ Law of Conservation of Mass✓ Law of Constant➤ Gas Laws<ul style="list-style-type: none">✓ Boyle's Law, Charles' Law & Gay Lussac's Law:✓ Combined Gas Law or Ideal Gas Equation➤ Atomic Structure and Atomic Theories<ul style="list-style-type: none">➤ Dalton's Atomic Theory➤ Modern Atomic Theory➤ Different Atomic Species➤ Isotope&Isobars➤ Atomic and Molecular Masses➤ Atomic Mass , Average Atomic Mass&Molecular Mass➤ Mole Concept and Molar Masses
Lecture - 2	<ul style="list-style-type: none">• Elements Compounds and Mixtures• Classification of Elements - Periodic Table<ul style="list-style-type: none">➤ Halogens, Noble Gases➤ Alloys, Metallurgy and Ores• Chemical Formula• Solution, Solute and Solvent<ul style="list-style-type: none">➤ Tyndall effect➤ Colloidal Solution• CHEMICAL BONDING AND STRUCTURE<ul style="list-style-type: none">➤ Electronic Theory of Valency➤ Types of Chemical Bonds<ul style="list-style-type: none">✓ Electrovalent or ionic bond , Covalent bond, Hydrogen Bond, Coordinate or Dative covalent bond➤ Van der Waals' forces• CHEMICAL REACTIONS<ul style="list-style-type: none">➤ Types of Chemical Reactions<ul style="list-style-type: none">✓ Combination Reactions, Decomposition Reactions, Displacement Reactions, Exothermic and Endothermic Reactions, Reversible and Irreversible Reactions• Acid base and salts• Radioactivity



Lecture - 3	<ul style="list-style-type: none"> • BASIC ORGANIC CHEMISTRY, HYDROCARBONS <ul style="list-style-type: none"> ➤ Some organic compounds, their properties and uses <ul style="list-style-type: none"> ✓ Methane , Methyl alcohol, Ethyl alcohol , Methyl Isocyanate, Urea, Dichlorodiphenyltrichloro ethane, Trinitrotoluene (TNT), Chloroform, Glycerol, Formic acid, Acetic acid, Oxalic acid ➤ Allotropes of Carbon • CHEMISTRY IN EVERYDAY LIFE <ul style="list-style-type: none"> ➤ Synthetic Materials in Everyday Life ➤ Manure, Fertilizers and Pesticides ➤ RDX (Research and development explosive, Dynamite ➤ Polymers- Polythene, Teflon, Thermocol, Carbon fibres, Nylon, Rubber ➤ Analgesics (Pain relievers), Antibiotics, Antiseptics and Disinfectants ➤ Chemicals in Food ➤ Fire Extinguisher ➤ Chemicals in Cosmetics
S. No.	Biology
Lecture - 1	<ul style="list-style-type: none"> • The living world • Biological Classification of Plants and Animals <ul style="list-style-type: none"> ➤ Monera, Protista, Fungi, Plantae, Animalia • Plant Kingdom <ul style="list-style-type: none"> ➤ Plant Parts and Their Functions ➤ Structural Organization in Plants ➤ Transport Of Water And Minerals In Plants ➤ Thallophytes, Bryophytes, Pteridophytes etc. ➤ Morphology & Anatomy of flowering plants.
Lecture - 2	<ul style="list-style-type: none"> • Plant Tissues <ul style="list-style-type: none"> ➤ Nutrition in Plants ➤ Photosynthesis – Food Making Process In Plants • Classification of Animal Kingdom <ul style="list-style-type: none"> ➤ Phylums- Annelida, Mollusca etc. ➤ Classes- reptilian, mammalia, pisces etc.
Lecture - 3	<ul style="list-style-type: none"> • Cell & cell organelle <ul style="list-style-type: none"> ➤ Prokaryotic Cells vs. Eukaryotic Cells ➤ Cell cycle and cell division
TEST-1	TEST CODE- BI01
Lecture - 4	<ul style="list-style-type: none"> • Animal Tissues <ul style="list-style-type: none"> ➤ Epithelial Tissue, Connective Tissue, Muscular Tissue etc. • Biomolecules <ul style="list-style-type: none"> ➤ Vitamins, fats , enzymes ➤ Deficiency diseases



Lecture - 5	<ul style="list-style-type: none"> • Human Digestive System <ul style="list-style-type: none"> ➤ Digestion and absorption, ➤ Digestive Glands • Human Respiratory System <ul style="list-style-type: none"> ➤ Respiration ➤ Mechanism of Breathing ➤ Exchange of Gases ➤ Transport of Gases
Lecture - 6	<ul style="list-style-type: none"> • Circulatory System <ul style="list-style-type: none"> ➤ Blood & Blood Vessels ➤ Lymph (Tissue Fluid) ➤ Cardiac Cycle ➤ Blood Groups • Endocrine system <ul style="list-style-type: none"> ➤ Glands and Hormones ➤ Pancreas ➤ Hormones of Heart, Kidney and Gastrointestinal Tract ➤ Mechanism of Hormone Action ➤ Neural Control and Coordination
TEST-2	TEST CODE-BI02
Lecture - 7	<ul style="list-style-type: none"> • Nervous System <ul style="list-style-type: none"> ➤ Human Brain ➤ Reflex Action and Reflex Arc • Movements <ul style="list-style-type: none"> ➤ Muscular System – Muscle Types ➤ Skeletal System
Lecture - 8	<ul style="list-style-type: none"> • Reproduction <ul style="list-style-type: none"> ➤ Reproduction in organism ➤ Reproduction in plants ➤ Human reproduction ➤ Fertilization, Implantation & Vitro Fertilization • Excretory System <ul style="list-style-type: none"> ➤ Microbes in human welfare
Lecture - 9	<ul style="list-style-type: none"> • Diseases Acute and Chronic Diseases <ul style="list-style-type: none"> ➤ Communicable Diseases ➤ Diseases Caused by Microorganisms ➤ Organ-Specific And Tissue Specific Diseases ➤ Vaccination and Immunization ➤ Diseases in Indian Children
TEST 3	TSET CODE-BI03

S. No.	Ecology & Environment
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Lecture-1	<ul style="list-style-type: none"> • Organism and The Environment <ul style="list-style-type: none"> ➤ Level of Organization ➤ Environment, Habitat and Niche • Ecosystem- Structure and Function <ul style="list-style-type: none"> ➤ Components, structure and functions of ecosystem ➤ Energy flow, Food Chain, Food Web ➤ Ecological pyramids and efficiencies ➤ Terrestrial & Aquatic Ecosystem ➤ Major Biomes
Lecture-2	<ul style="list-style-type: none"> • Biogeo Chemical Cycling or Nutrient Cycling <ul style="list-style-type: none"> ➤ Nutrient Cycles, Carbon, Nitrogen, Phosphorus & Sulphur Cycle • Population, Biotic Community and Succession <ul style="list-style-type: none"> ➤ Population ➤ Ecological interdependence and interaction ➤ Biotic Community ➤ Succession
Lecture-3&4	<ul style="list-style-type: none"> • Biodiversity <ul style="list-style-type: none"> ➤ Levels and magnitude of biodiversity ➤ Gradients and uses of biodiversity ➤ Threats and conservation to biodiversity ➤ Biodiversity hotspots ➤ IUCN Red List or Red Data List or Red Book ➤ International efforts for conserving biodiversity ➤ Biodiversity Conservation in India ➤ Animal & Plant diversity of India ➤ Marine diversity
TEST-1	TEST CODE –EV01
Lecture-5	<ul style="list-style-type: none"> • Pollution and Global Environmental Change <ul style="list-style-type: none"> ➤ Kinds of pollution; Air, Water, Soil and Noise- Sources, types and effects ➤ Ozone depletion, Green house & smog ➤ Pollution mitigation strategies ➤ Major Global Environmental Issues – climate change, global warming etc. ➤ Environmental Impact Assessment
Lecture-6	<ul style="list-style-type: none"> • Acts and policies to protect environment <ul style="list-style-type: none"> ➤ Institutions and Measures ➤ National Wildlife Action Plan ➤ Environmental Organizations ➤ Wetland Ecosystem- Ramsar Convention, Ramsar Sites ➤ International Environmental Conventions
TEST-2	TEST CODE –EV02

GS NCERT
SESSION PLAN

Duration of Course 5 Months
Total Classes 120 (2 Hours Each)

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