

Annexure III

Syllabus

Preliminary Examination

[Single Paper consisting of General Studies (Degree Standard – 175 questions), and Aptitude and Mental Ability (SSLC Standard – 25 questions)]

Code: 497

Part A: General Studies (Degree Standard – 175 Questions)

Unit I: General Science (10 Questions)

Scientific knowledge and scientific temper - Power of reasoning - Rote learning vs conceptual learning - Science as a tool to understand the past, present, and future; Nature of universe - General scientific laws – Mechanics - Properties of matter, force, motion, and energy - Everyday application of the basic principles of mechanics, electricity and magnetism, light, sound, heat, nuclear physics, laser, electronics, and communications; Elements and compounds, acids, bases, salts, petroleum products, fertilizers, pesticides; Main concepts of life science, classification of living organisms, evolution, genetics, physiology, nutrition, health and hygiene, human diseases; Environment and ecology; Latest inventions in science and technology; Current affairs.

Unit II: Geography of India (10 Questions)

Location - Physical features - Monsoon, rainfall, weather and climate - Water resources - Rivers in India - Soil, Minerals and Natural Resources - Forest and Wildlife - Agricultural pattern; Transport – Communication; Social Geography – Population density and distribution - Racial, linguistic groups and major tribes; Natural calamity - Disaster management – Environmental pollution - Reasons and preventive measures - Climate change - Green energy; Geographical landmarks; Current affairs.

Unit III: History, Culture of India, and Indian National Movement (25 Questions)

Indus Valley Civilization - Guptas, Delhi Sultans, Mughals, and Marathas - Age of Vijayanagaram and Bahmani Kingdoms - South Indian History; Change and continuity in the socio-cultural history of India; National Renaissance - Early uprising against British rule - Indian National Congress - Emergence of leaders – B.R.Ambedkar, Bhagat Singh, Bharathiar, V.O.Chidambaranar, Jawaharlal Nehru, Kamarajar, Mahatma Gandhi, Maulana Abul Kalam Azad, Thanthai Periyar, Rajaji, Subash Chandra Bose, Rabindranath Tagore, and others; Different modes of agitation: Growth of Satyagraha and Militant Movements; Communalism and Partition; Characteristics of Indian Culture, Unity in Diversity – Race, Language, Custom; India as a Secular State, Social Harmony; Prominent personalities in various spheres – Arts, Science, Literature and Philosophy; National symbols – Eminent personalities and places in news – Sports – Books and Authors; Current affairs.

Unit IV: Indian Polity (40 Questions)

Constitution of India - Preamble to the Constitution - Salient features of the Constitution - Union, State and Union Territory - Citizenship, Fundamental Rights, Fundamental Duties, Directive Principles of State Policy - Union Executive, Union Legislature - State Executive, State Legislature - Local Governments, Panchayat Raj - Spirit of federalism: Centre - State relationships - Election - Judiciary in India – Rule of Law - Corruption in public life – Anti-corruption measures - Lokpal and Lok Ayukta - Right to Information - Empowerment of Women - Consumer Protection Forums, Human Rights Charter; Political parties and political system in India; Current affairs.

Unit V: Indian Economy and Development Administration in Tamil Nadu (50 Questions)

Nature of Indian Economy – Five-year plan models - an assessment - Planning Commission and Niti Aayog; Sources of revenue - Reserve Bank of India - Fiscal Policy and Monetary Policy - Finance Commission - Resource sharing between Union and State Governments - Goods and Services Tax; Structure of Indian economy and employment generation, Land Reforms and Agriculture - Application of Science and Technology in Agriculture - Industrial growth - Rural welfare oriented programmes - Social problems - Population, Education, Health, Employment, Poverty; Human Development Indicators in Tamil Nadu and a comparative assessment across the Country – Impact of social reform movements in the socio-economic development of Tamil Nadu - Political parties and welfare schemes for various sections of people - Rationale behind the reservation policy, and access to the social resources - Economic trends in Tamil Nadu - Role and impact of social welfare schemes in the socio- economic development of Tamil Nadu - Social justice and social harmony as the cornerstones of socio- economic development; Education and health systems in Tamil Nadu; Geography of Tamil Nadu and its impact on economic growth; Achievements of Tamil Nadu in various fields; e-Governance in Tamil Nadu; Public awareness and General administration - Welfare oriented Government schemes and their utility, Problems in public delivery systems; Current socio-economic issues; Current affairs.

Unit VI: History, Culture, Heritage, and Socio-Political Movements in Tamil Nadu (40 Questions)

History of Tamil Society, related archaeological discoveries, Tamil literature from Sangam age till contemporary times; Thirukkural - Significance as a secular literature - Relevance to everyday life, Impact of Thirukkural on humanity, Thirukkural and universal values - Relevance to Socio-politico- economic affairs, Philosophical content in Thirukkural; Role of Tamil Nadu in freedom struggle - Early agitations against British Rule - Role of women in freedom struggle; Evolution of 19th and 20th century socio-political movements in Tamil Nadu - Justice Party, Growth of Rationalism - Self Respect Movement, Dravidian Movement, and principles underlying both these movements; Contributions of Thanthai Periyar and Perarignar Anna.

Part B: Aptitude and Mental Ability (SSLC Standard - 25 Questions)

Unit I: Aptitude (15 Questions)

Simplification - Percentage - Highest Common Factor (HCF) - Lowest Common Multiple (LCM) - Ratio and Proportion - Simple interest - Compound interest - Area - Volume - Time and Work.

Unit II: Reasoning (10 Questions)

Logical reasoning - Puzzles - Dice - Visual reasoning - Alpha numeric reasoning - Number series.

தாள் I - கட்டாயத் தமிழ் மொழி தகுதித் தேர்வு

(பத்தாம் வகுப்புத் தரம் - 100 மதிப்பெண்கள் - விரிந்துரைக்கும் வகை)

தேர்வுத் திட்டம்

மொழிபெயர்த்தல்: தமிழிலிருந்து ஆங்கிலத்துக்கு மொழிபெயர்த்தல், ஆங்கிலத்திலிருந்து தமிழுக்கு மொழிபெயர்த்தல்: சுருக்கி வரைதல்: பொருள் உணர்திறன்: சுருக்கக் குறிப்பிலிருந்து விரிவாக்கம் செய்தல்: திருக்குறள் தொடர்பான கட்டுரை வரைதல்: கடிதம் வரைதல் (அலுவல் சார்ந்தது); தமிழ் மொழி அறிவு

பாடத்திட்டம்

தற்கால நிகழ்வுகள்: சமுதாயப் பிரச்சனைகள்: சுற்றுச்சூழல் தொடர்பான தலைப்புகள்: இந்தியப் பொருளாதாரம் தொடர்பான தலைப்புகள்: அறிவியலும் தொழில்நுட்பமும்: கலையும் பண்பாடும்: பகுத்தறிவு இயக்கங்கள் - திராவிட இயக்கம் , சுயமரியாதை இயக்கம்: இக்காலத் தமிழ்மொழி - கணினித் தமிழ் , வழக்கு மன்றத் தமிழ், அலுவலக மொழியாகத் தமிழ், புதிய வகைமைகள்: தமிழ்நாட்டின் சமூகப் பொருளாதார முன்னேற்றம் மற்றும் தமிழ்நாட்டு அரசின் நலத்திட்டங்கள் (பெண்கள், விவசாயிகள்...), சமூக நலத்திட்டங்களை நடைமுறைப்படுத்துதலில் சமூக சீர்திருத்த இயக்கங்களின் பங்கு - இட ஒதுக்கீடும் அதன் பயன்களும் - தமிழ்நாட்டின் சமூகப் பொருளாதார வளர்ச்சியில் சமூக நீதி மற்றும் சமூக ஒற்றுமையின் பங்கு: சொந்த வாக்கியத்தில் அமைத்து எழுதுக, பொருள் வேறுபாடு அறிதல்: பிரித்தெழுதுக, எதிர்ச்சொல் , எதிர்மறை வாக்கியம் , பிழை நீக்கி எழுதுக: திருக்குறளிலிருந்து தலைப்புகள் தொடர்பாக கட்டுரை எழுதுதல்: மதச் சார்பற்ற தனித் தன்மையுள்ள இலக்கியம், அன்றாட வாழ்வியலோடு தொடர்புத் தன்மை, மானுடத்தின் மீதான திருக்குறளின் தாக்கம், திருக்குறளும் மாறாத விழுமியங்களும் - சமத்துவம், மனிதநேயம் முதலானவை: சமூக அரசியல் பொருளாதார நிகழ்வுகளில் திருக்குறளின் பொருத்தப்பாடு, திருக்குறளில் தத்துவக் கோட்பாடுகள்.

Paper II – General Studies I (Degree Standard – 250 Marks)

Unit I: Modern History of India and Indian Culture (100 marks)

Advent of Europeans – Colonialism and imperialism – Establishment, expansion and consolidation of British Rule – Early uprising against British Rule – South Indian rebellion 1799 – 1801 A.D. – Vellore rebellion 1806 A.D. – Sepoy mutiny of 1857 A.D. – Indian National Movements – Moderation, Extremism and Terrorism Movements of Indian Patriotism – Significant Indian National Leaders – Rabindranath Tagore, Maulana Abulkalam Azad, Mohandas Karamchand Gandhi, Jawaharlal Nehru, Subhas Chandra Bose, B.R.Ambedkar and Vallabhai Patel – Constitutional developments in India from 1773 to 1950 – Second World War and final phase of independence struggle – Partition of India – Role of Tamil Nadu in freedom struggle – Subramanya Siva – Subramania Bharathiyar, V.O.Chidambaranar, C.Rajagopalachariyar, Thanthai Periyar, Kamarajar and others; Impact of British rule on socio- economic affairs – National Renaissance Movement – Socio-religious reform movements – Social reform and educational reform acts; Emergence of “Social Justice” Ideology in Tamil Nadu – Origin, Growth, Decay and achievements of Justice Party – Socio-political movements and its achievements after Justice Party; India since Independence – Salient features of Indian culture – Unity in diversity – Race – Language – Religion, Customs and Rituals – India, a Secular State; Organizations for Fine Arts, Dance, Drama and Music; Cultural Panorama – National Symbols – Eminent personalities in cultural field – Latest historical research developments in Tamil Nadu.

Unit II: Social Issues in India and Tamil Nadu (100 marks)

Population Explosion – Fertility, Mortality – Population Control Programmes – Migration - Poverty – Illiteracy – Dropouts – Right to Education – Women Education – Skill based education and programmes – E-

Learning; Child labour and Child abuse - Child Education – Child school dropouts – Child abuse - Laws to protect Child abuse – Child protection and welfare schemes; Sanitation: Rural and Urban Sanitation – Role of Panchayat Raj and Urban development agencies in sanitation schemes and programmes; Women Empowerment: Social justice to women – Schemes and programmes - Domestic violence – Dowry menace – Sexual assault – Laws and awareness programmes - Prevention of violence against women – Role of Government and NGOs in women empowerment – Schemes and Programmes; Social Changes: Urbanization – Policy, Planning and Programmes in India and Tamil Nadu – Comparative study on social and economic indicators – Impact of violence on society – Religious violence – Terrorism and Communal violence – Causes – Steps to control and awareness; Problems of minorities; Human rights issues; Regional disparities in India – Causes and remedies; Social development: Approaches – Models – Policies and programmes – Linkage between education and social development - Community development programmes – Self-employment and entrepreneurship development – Role of NGOs in social development; Education - Health and human development – Health care problems in India – Children, Adolescents, Women and Aged - Health Policy in India – Schemes – Health Care Programmes in India; Vulnerable sections of the population: Problems – laws and punishments – Various welfare programmes to vulnerable sections by State, Central Government and NGOs; Current Affairs.

Unit III: Ethics and Integrity (50 marks)

Ethics and Human Interface: Definition and scope of ethics – Ethics of Indian Schools of Philosophy - Ethics of Thirukkural; Kinds of ethics: Intuitionism – Existentialism – Duties and responsibility – Moral judgements – Moral Absolutism – Moral Obligation; Attitude: Its influence and relation with thought and behaviour – Moral and political attitudes; Ethics in public administration: Philosophical basis of governance and probity in Governance – Codes of ethics and conduct: Primary responsibilities of public service professionals – Transparency of information sharing and service delivery – Professional and non-professional interaction – Potentially beneficial interaction – Maintenance of confidentiality of records – Disclosure of Information – Boundaries of competence – Consultation on ethical obligation – Ethics and Non-discrimination – Citizen's Charters - Challenges of corruption - Ethics of public polity determination.

Paper III – General Studies II (Degree Standard – 250 Marks)

Unit I: Indian Polity and Emerging Political Trends across the World affecting India (100 marks)

Constitution of India - Historical background - Making of the Indian Constitution - Preamble - Salient features of Indian Constitution - Parts, Articles and Schedules – Amendments; Citizenship; Fundamental Rights and Fundamental Duties; Directive Principles of State Policy; Structure, Power and Functions of Governments: Union Government - Legislature: Parliament – Lok Sabha and Rajya Sabha; Executive: President, Vice-President - Prime Minister and Council of Ministers – Constitutional Authorities; Judiciary: Supreme Court - Judicial Review - Judicial activism - Latest Verdicts; State Government - Legislature: State Legislative Assembly - State Legislative Council; Executive: Governor - Chief Minister - Council of Ministers; Judiciary: High Court - District Courts - Subordinate Courts – Tribunals; Local Government: Rural and Urban Local Governments - Historical background - 73rd and 74th Constitutional Amendment Acts; Union Territories: Evolution – Administration; Federalism: Indian Federal System – Differentiating from other forms of federalism; Union - State Relations: Legislative, Administrative and Financial relations; Indian Administration: Civil Services in India - Historical background - Classification of Civil Services - Central and State Services –Recruitment and Training; Political Parties: National and Regional - Pressure groups - Public opinion - Mass Media - Social Media - Non - Governmental Organizations (NGOs); Administrative Reforms: Central Vigilance Commission - Anti-Corruption measures – Lokadalat – Lokayukta – Lokpal – Ombudsman in India - RTI Act - Citizen's Grievances and Administrative Reform Commission - Administrative Tribunals; Profile of Indian States: Demography - State Language - Developmental Programmes - e-governance; India and World: India's foreign policy - India's relationship with world countries - Defence and National Security – Nuclear Policy – Terrorism - Human Rights and Environmental issues - International Organisations – Pacts and Summits; Current Affairs.

Unit II: Role and Impact of Science and Technology in the Development of India (100 marks)

Science and Technology – Role, Achievements and Developments - their applications and impacts; Elements and Compounds, Acids, Bases and Salts – Oxidation and reduction - Carbon, Nitrogen and their compounds – Chemistry of Ores and Metals – Fertilizers, Pesticides, Insecticides – Polymer and Plastics - Corrosion – Chemistry in everyday life; Energy – Renewable and Non-Renewable – Self-sufficiency – Oils and Minerals exploration; Space Research - Nano Science and Technology – Application of

Nano-materials; Advancements in the fields of Information Technology - Robotics and Automation - Artificial Intelligence – Mobile Communication; Computer System Architecture, Operating System, Computer Networks, Cryptography and Network security, Relational Database Management System, Software Engineering, Image Processing, Machine Learning; Cropping pattern in India – Organic farming – Agriculture Biotechnology – Commercially available Genetically Modified Crops – Eco, Social impact of Genetically Modified Crops – Intellectual Property Rights, Bio Safety; Floriculture, Olericulture, Pomology and Medicinal Plants, Conventional and Modern Propagation Technique, Glass House – Hydroponics – Bonsai – Garden features and operations – methods to preserve fruits and vegetables; Genetic Engineering and its importance in Agriculture - Integrated farming – Vermiculture; Main concepts of Life Science – the cell – the basic unit of life – classification of living organism – Nutrition and Dietetics – Respiration – Blood and blood circulation – Endocrine system – Excretion of metabolic wastes – Reproductive system – Animals and human-bio communication - Pheromones and allelochemicals – Genetics – Science of heredity – Health and hygiene – Human diseases – Communicable and non-communicable diseases – Preventions and remedies – Alcoholism and drug abuse – Genetic engineering – Organ transplantation – Stem Cell Technology – Forensic science – Sewage treatment; Government policy – Organisations in Science and Technology – Role and Functions – Defence Research and Development Organisation (DRDO) – Ocean Research and Development – Medical Tourism - Achievements of Indians in the fields of Science and Technology - Latest inventions in Science and Technology; Current Affairs.

Unit III: Tamil Society – Culture and Heritage (50 marks)

(Candidates may answer the questions in this unit either in Tamil or in English)

Origin and Development of Tamilian – Palmleaf Manuscript – Document – Archaeological excavation in Tamil Nadu – Adhichanallur, Arikamedu, Keeladi, Konthakai, Manalur, Sivakalai; Arts, Science and Culture: Literature, Music, Drama and other arts – Science – Culture (Internal and External); Tamil Society and the condition of business – Sangam age – Medieval age – Modern age; Growth of Rationalist – Origin and Development of Dravidian Movements in Tamil Nadu – Their contribution in Socio and economic development; Socio and cultural life of the modern Tamilian: Caste, Religion, Women, Polity, Education, Economics, Commerce and Relationship with other countries – Tamil Diaspora; Development of modern Tamils: Print – Edition – Translation – Film Industries – Computer and Media.

Paper IV – General Studies III (Degree Standard – 250 Marks)

Unit I: General Geography and Geography of India with Special Reference to Tamil Nadu (75 marks)

Earth and Universe: Solar System – Atmosphere, Lithosphere, Hydrosphere and Biosphere; India and Tamil Nadu: Location - Physical Divisions - Drainage - Weather and Climate: Monsoon, Rainfall - Natural Resources: Soil, Natural Vegetation, Wildlife – Irrigation and Multipurpose Projects - Mineral Resources - Energy Resources – Agriculture: Crops, Livestock, Fisheries, Agricultural Revolutions – Industries - Population: Growth, Distribution and Density – Migration - Races, Tribes, Linguistics and Religions – Trade – Geo Politics: Border Disputes; Ocean and Sea: Bottom relief features of Indian Ocean, Arabian Sea and Bay of Bengal; Geospatial Technology: Remote Sensing, Geographical Information System (GIS) and Global Navigation Satellite System (GNSS); Map: Locating features and Places; Current Affairs.

Unit II: Environment, Biodiversity and Disaster Management (75 marks)

Ecology: Structure and function of ecosystem – Ecological succession – Ecosystem services - Biodiversity conservation - Biodiversity Types – Biodiversity Hot Spots in India; Biodiversity : Significance and Threats – In-situ and Ex-situ conservation measures – Roles of Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), International Union for Conservation of Nature (IUCN) and Convention on Biological Diversity (CBD) – Biodiversity Act; Environmental Pollution and Management: Air, Water, Soil, Thermal and Noise pollution – Pollution Prevention and control strategies – Solid and hazardous waste management – Environmental Standards and Environmental Monitoring - Environmental Impact Assessment (EIA): Steps in EIA process – Environmental Clearance – Environmental Auditing; Sustainable Development: Global Environmental Issues and Management – Sustainable Development Goals (SDGs) and Targets – Climate Change – Changes in monsoon pattern in Tamil Nadu, India and Global scenario - Environmental consequences of climate change and mitigation measures – Clean and Green Energy – Paris Agreement – Nationally Determined Contributions (NDCs); Environmental Laws, Policies and Treaties in India and Global scenario - Natural calamities, Manmade Disasters - Disaster

Unit III: Indian Economy – Current Economic Trends and Impact of Global Economy on India (100 marks)

Features of Indian Economy – National Income – Capital formation - NEP (New Economic Policy) – NITI Aayog (National Institution for Transforming India); Agriculture – Role of Agriculture – Land Reforms – New Agricultural Strategy – Green Revolution – Contract Farming – Minimum Support Price - Price Policy, Public Distribution System (PDS), Subsidy, Food Security – Agricultural Marketing, Crop Insurance, Labour – Rural Credit and Indebtedness – World Trade Organization and Agriculture; Industry - Growth - Policy – Role of Public Sector and Disinvestment – Privatisation and Liberalization – Public Private Partnership (PPP) – SEZs (Special Economic Zones) – MSMEs (Micro, Small and Medium Enterprises) – Make in India; Infrastructure in India – Transport System – Power – Communication – Social Infrastructure – Research and Development; Banking and Finance: Banking, Money and Finance – Central Bank – Commercial Bank – Non Banking Financial Institutions – Stock Market – Financial Reforms – Financial Stability – Monetary Policy – Reserve Bank of India and Autonomy; Public Finance – Sources of Revenue – Tax and Non-Tax Revenue – Canons of Taxation – Goods and Service Tax – Public Expenditure – Fiscal Policy – Public Debt – Finance Commission – Fiscal Federalism; Issues in Indian Economy – Poverty and Inequality – Poverty alleviation programmes – Mahatma Gandhi National Rural Employment Guarantee Act – New Welfare Programmes for Rural Poverty – Unemployment – Gender inequality; Inflation - Inflation targeting – Deflation – Sustainable Economic Growth; India's Foreign Trade – Balance of Payment, Export-Import Policy, Foreign Exchange Market, Foreign Direct Investment; Globalization – Global Economic Crisis - Impact on Indian economy; International Institutions – IMF (International Monetary Fund) - World Bank – BRICS (Brazil, Russia, India, China and South Africa) – SAARC (South Asian Association for Regional Co-operation) – ASEAN (Association of South East Asian Nations).

Tamil Nadu Economy and Issues – Gross State Domestic Product – Trends in State's Economic Growth – Demographic Profile of Tamil Nadu – Agriculture – Contract Farming; Tamil Nadu State Policy on Promotion of Organic Farming – Industry and Entrepreneurship Development in Tamil Nadu – Infrastructure – Power, Transportation systems - Tourism – Health – Eco-tourism – Social Infrastructure – Self Help Groups and Rural women empowerment – Rural Poverty and Unemployment – Regional economic disparities – Local Government - Recent Government welfare programmes; Current Affairs.