



TAMIL NADU GENERATION AND DISTRIBUTION CORPORATION LIMITED

General Studies

Degree Standard - Junior Assistant (Admin.) & Junior Auditor

Unit - I General Science :

Physics - Universe-General Scientific laws-Scientific instruments-Inventions and discoveries- National scientific laboratories-Science glossary-Mechanics and properties of matter-Physical quantities, standards and units-Force, motion and energy-electricity and Magnetism -Heat, light and sound-Atomic and nuclear physics.

Chemistry- Elements and Compounds-Acids, bases and salts-Oxidation and reduction-Chemistry of ores and metals-Carbon, nitrogen and their compounds-Fertilizers, pesticides, insecticides

Botany- Main Concepts of life science-The cell-basic unit of life-Classification of living organism- -Nutrition and dietetics-Respiration

Zoology- Blood and blood circulation-Endocrine system-Reproductive system-Genetics the science of heredity-Environment, ecology, health and hygiene, Bio- diversity and its conservation-Human diseases, prevention and remedies-Communicable diseases and non-communicable diseases

Unit-II Current Events

History- Latest diary of events – National-National symbols-Profile of States -Eminent persons & places in news-Sports & games-Books & authors -Awards & honours-Latest historical events- India and its neighbours - Appointments-who is who?

Political Science- Problems in conduct of public elections- Political parties and political system in India- Public awareness & General administration - Role of Voluntary organizations & Govt.,- Welfare oriented govt. schemes, their utility-

Geography- Geographical landmarks-Policy on environment and ecology-

Economics- Current socio-economic problems, New economic policy & govt. sector

Science- Latest inventions on science & technology Latest discoveries in Health Science Mass media & communication

Unit- III Geography

Earth and Universe-Solar system-Atmosphere hydrosphere, lithosphere-Monsoon, rainfall, weather and climate-Water resources -rivers in India-Soil, minerals & natural resources- Natural vegetation-Forest & wildlife-Agricultural pattern, livestock & fisheries- Social geography – population-density and distribution-Natural calamities – disaster management-

Unit-IV History and culture of India

South Indian history-Culture and Heritage of Tamil people--Advent of European invasion- Expansion and consolidation of British rule-Effect of British rule on socio-economic factors-Social reforms and religious movements-India since independence-Characteristics of Indian culture- Unity in diversity –race, colour, language, custom-India-as secular state-Organizations for fine arts, dance, drama, music-Growth of rationalist, Dravidian movement in TN-Political parties and populist schemes- Prominent personalities in the various spheres – Arts, Science, literature and Philosophy – Mother Teresa, Swami Vivekananda, Pandit Ravishankar , M.S.Subbulakshmi, Rukmani Arundel and J.Krishnamoorthy etc.

UNIT-V INDIAN POLITY

Constitution of India- Preamble to the constitution- Salient features of constitution- Union, State and territory - Fundamental rights- Fundamental duties- Human rights charter- Union legislature – Parliament- State executive- State Legislature – assembly- Status of Jammu & Kashmir-. Local government – panchayat raj – Tamil Nadu- Judiciary in India – Rule of law/Due process of law- Indian federalism – center – state relations- Emergency provisions- Elections - Election Commission Union and State- Amendments to constitution- Schedules to constitution- Administrative reforms & tribunals- Corruption in public life- Anti-corruption measures – Central Vigilance Commission, lok-adalats, Ombudsman, Comptroller and Auditor General of India- Right to information - Central and State Commission- Empowerment of women.

UNIT-VI INDIAN ECONOMY

Nature of Indian economy- Five-year plan models-an assessment-Land reforms & agriculture-Application of science in agriculture-Industrial growth-Role of public sector & disinvestment- Development of infrastructure- National income Rural welfare oriented programmes- Social sector problems – population, education, health, employment, poverty- HRD – sustainable economic growth- Economic trends in Tamil Nadu - Energy Different sources and development- Finance Commission - Planning Commission- National Development Council.

UNIT-VI INDIAN NATIONAL MOVEMENT

Early uprising against British rule-1857 Revolt- Indian National Congress-Emergence of national leaders-Gandhi, Nehru, Tagore, Netaji-Growth of militant movements -Communalism led to partition-Role of Tamil Nadu in freedom struggle - Rajaji, VOC, Periyar, Bharathiar& Others-Birth of political parties /political system in India since independence.

UNIT- VII APTITUDE & MENTAL ABILITY TESTS

Conversion of information to data--Collection, compilation and presentation of data Tables, graphs, diagrams-Analytical interpretation of data -Simplification-Percentage-Highest Common Factor (HCF)-Lowest Common Multiple (LCM)-Ratio and Proportion-Simple interest-Compound interest-Area-Volume-Time and Work Decision making and problem solving-Logical Reasoning- Puzzles-Dice-Visual Reasoning-Alpha numeric Reasoning-Number Series- Logical Number/Alphabetical/Diagrammatic Sequences.



TAMIL NADU GENERATION AND DISTRIBUTION CORPORATION LIMITED

CHEMISTRY (Degree Standard) - Tester Chemical

1.1 Reaction Kinetics:-

Rate laws - rates constant for first, second, third and zero order reaction - Half life period - Arrhenius theory - collision theory - Absolute reaction rate theory - ionic reaction - salt effect - catalysis - Laws of photo chemistry, quantum efficiency - photo physical processes of electronic excited molecules.

1.2 Chemical Equilibrium:-

partial molar quantities, Gibbs - Duhem equation, Equilibrium constant - temperature dependence of equilibrium constant - phase rule and its applications to two and three components systems.

1.3 Solid State:-

Crystal systems - designation of crystal faces, lattice structure and unit cell - law of rational indices - Bragg's law and x rays diffraction by crystals - Schottky and Frenkel defects - Electrical properties - Insulators and semiconductors - band theory of solids.

1.4 Electrochemistry:-

Types of Reversible electrodes - Nernst equation - calculation of thermo dynamic quantities of cell reactions - over potential and hydrogen over voltage - Determination of pKa of acids by potentiometric methods - Kohlrausch's law - Ostwald's dilution law - Debye - Huckel onsager equation for Strong electrolytes - (no derivation required) - Primary and Secondary fuel cells - corrosion and prevention.

1.5 Structure and Bonding:-

Electronic configuration of atoms, atom symbols and periodic properties of elements, Ionic radii, ionisation potential electron affinity, electronegativity, concept of Hybridization molecular orbitals and electronic configuration of homo-nuclear and hetero nuclear diatomic molecules, shapes of polyatomic molecules VSEPR theory, symmetry elements and point groups for simple molecules, Bond lengths, Bond angles, bond order and bond energies Types of chemical bond (weak and strong) inter molecular forces, structure of simple ionic and covalent bonds - lattice energy.

1.6 Acids and Bases:-

Bronsted and Lewis acids and bases - pH and pKa acid - base concept in non - aqueous media - HSAB concept - Buffer Solutions. Redox Reactions:- Oxidation numbers, Redox potential, Electro chemical series - Redox indicators.

1.7 Chemistry of Non - transition elements:-

General characteristics, structure and reaction of simple compounds - boranes - silicates Oxoacids of N, P,S and halogens - xenon compounds - inter halogens, Pseudo halides and noble gas compounds.

1.8 IUPAC Nomenclature of simple organic and Inorganic compounds.

1.9 Organic reaction mechanism:- General methods (Kinetic and non-Kinetic) of study of reaction mechanisms SN1, SN2 mechanisms - addition substitution, elimination and rearrangements -free radical mechanism - aromatic substitution - formation and stability of reactive intermediate (Carbocations, Carbanion's free radicals, nitrates and benzyne) - Polar effects - Hammett's equation and its modification.

1.10 Chemistry of important organic reaction:-

Aldol condensation - Claisen condensation - perkin reaction - cannizzaro reaction - Friedel craft reaction - Favorski reaction - Stork enamine reaction - Michael addition - Baeyer - villiger reaction - Chichibabin reaction pericyclic reactions - classification and examples - woodward and Hoffmann rules - use of OsO₄, NBS, diborane, NaBH₄, LiAlH₄ in organic Synthesis.

APTITUDE & MENTAL ABILITY TESTS

Conversion of information to data-Collection, compilation and presentation of data Tables, graphs, diagrams
Analytical interpretation of data Simplification Percentage Highest Common Factor (HCF) Lowest Common
Multiple (LCM) Ratio and Proportion - Simple interest - Compound interest – Area – Volume - Time and
Work Decision making and problem solving - Logical Reasoning – Puzzles – Dice-Visual Reasoning - Alpha
numeric Reasoning - Number Series - Logical Number/ Alphabetical/ Diagrammatic Sequences.



TAMIL NADU GENERATION AND DISTRIBUTION CORPORATION LIMITED

COMMERCE (Degree Standard) - Junior Assistant (Accounts)

UNIT I Commerce:- Economic basis of commerce - Commerce - trade - industry characteristics of Business - Business systems - Concepts of systems theory applied to business - concept of social obligation - Responsibility and Responsiveness.

UNIT II Forms of private and public sector enterprises - different kinds of organisation - sole proprietorship, partnership, joint stock company, promotion, incorporation, prospectus, commencement of business - functions of stock exchange - cooperative societies - characteristics, Registration and control - types of societies. Public enterprises Meaning, characteristics, Economic, social and political objectives, argument in favour and against public enterprise - Departmental undertakings, Public corporation, Government company, Joint enterprise - Government holding companies.

UNIT III The evolution of management science - definition - basic principles - process of Management - functions, planning, organising, staffing, direction, communication, controlling, motivation - Management by objectives. Office equipments.

UNIT IV Banking, commercial banks - functions, kinds of banks - banks and economic development - rural banks - cooperative banks, lead banks scheme - banker and customer - collecting and paying banker - rights, liabilities and protection, cheques, bills - National and International, letters of credit, crossing, marking and Endorsements- Mutual funds - Meaning organisation, management, objectives.

UNIT V Business law - Basic principles - law of contracts - specific contractor - law of agency, sale of goods Act, sales tax law, central excise law, law of Insurance.

UNIT VI Financial Accounting - principles - trading and non-trading, account form in complete records, hire purchase and instalment system, consignment - Joint venture - partnership - administration - retirement. Company accounts - issue, redemption of shares and debentures - forfeiture and re-issue - final account (simple problems).

UNIT VII Management and Cost accounting - elements of Cost - Cost sheet - Reconciliation of cost and financial account - Marginal Costing - standard Costing - Variance analysis.

UNIT VIII Auditing - objectives, valuations and verification, appointment, powers duties, qualification - audit report, audit programmes, cost audit.

APTITUDE & MENTAL ABILITY TESTS

Conversion of information to data-Collection, compilation and presentation of data Tables, graphs, diagrams-Analytical interpretation of data -Simplification-Percentage-Highest Common Factor (HCF) - Lowest Common Multiple (LCM)-Ratio and Proportion-Simple interest-Compound interest-Area-Volume-Time and Work Decision making and problem solving-Logical Reasoning-Puzzles-Dice-Visual Reasoning-Alpha numeric Reasoning-Number Series- Logical Number/ Alphabetical/ Diagrammatic Sequences.

SYLLABUS – GENERAL ENGLISH

Grammar

1. Match the following words and Phrases given in Column A with their meanings in Column B.
2. Choose the correct 'Synonyms' for the underlined word from the options given
3. Choose the correct 'Antonyms' for the underlined word from the options given
4. Select the correct word (Prefix, Suffix)
5. Fill in the blanks with suitable Article
6. Fill in the blanks with suitable Preposition
7. Select the correct Question Tag
8. Select the correct Tense
9. Select the correct Voice
10. Fill in the blanks (Infinitive, Gerund, and Participle)
11. Identify the sentence pattern of the following sentence (Subject, Verb, and Object.) Blanks with correct 'Homophones'
12. Find out the Error (Articles, Prepositions, Noun, Verb, Adjective, and Adverb)
13. Comprehension
14. Select the correct sentence
15. Find out the odd words (Verb, Noun, Adjective, and Adverb)
16. Select the correct Plural forms
17. Identify the sentence (Simple, Compound, Complex Sentence)
18. Identify the correct Degree.
19. Form a new word by blending the words.
20. Form compound words (Eg: Noun+Verb, Gerund+Noun)

பாடத்திட்டம் – பொதுத் தமிழ் (கொள்குறிவகைத் தேர்விற்கு)

இலக்கணம்

1. பொருத்துதல் – பொருத்தமான பொருளைத் தேர்வு செய்தல் (ii) புகழ் பெற்ற நூல் நூலாசிரியர்.
2. தொடரும் தொடர்பும் அறிதல் (i) இத்தொடரால் குறிக்கப்பெறும் சான்றோர் (ii) அடைமொழியால் குறிக்கப்பெறும் நூல்
3. பிரித்தெழுதுக
4. எதிர்ச்சொல்லை எடுத்தெழுதுதல்
5. பொருந்தாச் சொல்லைக் கண்டறிதல்
6. பிழை திருத்தம் (i) சந்திப்பிழையை நீக்குதல் (ii) ஒருமை பன்மை/ பிழைகளை நீக்குதல் மரபுப் பிழைகள், வழவுச் சொற்களை நீக்குதல்/ பிறமொழிச் சொற்களை நீக்குதல்
7. ஆங்கிலச் சொல்லுக்கு நேரான தமிழ்ச் சொல்லை அறிதல்
8. ஒலி வேறுபாடறிந்து சரியான பொருளையறிதல்
9. ஒரெழுத்து ஒருமொழி உரிய பொருளைக் கண்டறிதல்
10. வேர்ச்சொல்லைத் தேர்வு செய்தல்
11. வேர்ச்சொல்லைக் கொடுத்து/ வினையுற்று, வினையெச்சம், வினையாலனையும் பெயர், தொழிற் பெயரை/ உருவாக்கல்
12. அகர வரிசைப்படி சொற்களைச் சீர் செய்தல்
13. சொற்களை ஒழுங்குபடுத்தி சொற்றொடராக்குதல்
14. பெயர்ச்சொல்லின் வகையறிதல்
15. இலக்கணக் குறிப்பறிதல்
16. விடைக்கேற்ற வினாவைத் தேர்ந்தெடுத்தல்
17. எவ்வகை வாக்கியம் எனக் கண்டெழுதுதல்
18. தன்வினை, பிறவினை, செய்வினை, செய்ப்பாட்டு வினை வாக்கியங்களைக் கண்டெழுதுதல்
19. உவமையால் விளக்கப்பெறும் பொருத்தமான பொருளைத் தேர்ந்தெழுதுதல்
20. எதுகை, மோனை, இயைபு இவற்றுள் ஏதேனும் ஒன்றைத் தேர்ந்தெழுதுதல்.



TAMIL NADU GENERATION AND DISTRIBUTION CORPORATION LIMITED

SYLLABUS – GENERAL ENGLISH

S.S.L.C. Standard (Objective Type)

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20. Form compound words (Eg: Noun+Verb, Gerund+Noun)



TAMIL NADU GENERATION AND DISTRIBUTION CORPORATION LIMITED

பாடத்திட்டம் – பொதுத் தமிழ் (கொள்முறிவகைத் தேர்விற்கு)
எஸ்.எஸ்.எல்.சி. தரம்

இலக்கணம்

1. பொருத்துதல் – பொருத்தமான பொருளைத் தேர்வு செய்தல் (ii) புகழ் பெற்ற நூல் நூலாசிரியர்.
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3. பிரித்தெழுதுதல்
4. எதிர்ச்சொல்லை எடுத்தெழுதுதல்
5. பொருந்தாச் சொல்லைக் கண்டறிதல்
6. பிழை திருத்தம் (i) சந்திப்பிழையை நீக்குதல் (ii) ஒருமை பன்மை/ பிழைகளை நீக்குதல் மரபுப் பிழைகள், வழுவச் சொற்களை நீக்குதல்/ பிறமொழிச் சொற்களை நீக்குதல்
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10. வேர்ச்சொல்லைத் தேர்வு செய்தல்
11. வேர்ச்சொல்லைக் கொடுத்து/ வினைமுற்று, வினையெச்சம், வினையாலனையும் பெயர், தொழிற் பெயரை/ உருவாக்கல்
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19. உவமையால் விளக்கப்பெறும் பொருத்தமான பொருளைத் தேர்ந்தெழுதுதல்
20. எதுகை, மோனை, இயைபு இவற்றுள் ஏதேனும் ஒன்றைத் தேர்ந்தெழுதுதல்.



TAMIL NADU GENERATION AND DISTRIBUTION CORPORATION LIMITED

General Studies SSLC Standard

UNIT – I General science

Physics: Nature of Universe - General Scientific laws - Inventions and discoveries - National scientific laboratories - Mechanics and properties of matter - Physical quantities, standards and units - Force, motion and energy - Magnetism, electricity and electronics - Heat, light and sound

Chemistry: Elements and Compounds - Acids, bases and salts - Fertilizers, pesticides, insecticides

Botany: Main Concepts of life science - Classification of living organism - Nutrition and dietetics – Respiration

Zoology: Blood and blood circulation - Reproductive system - Environment, ecology, health and hygiene - Human diseases including communicable and non – communicable diseases, prevention and remedies - Animals, plants and Human life.

UNIT II Current Events

History Latest diary of events-national - National symbols - Profile of States - Eminent persons & places in news - Sports & Games - Books & Authors - Awards & Honors' - India and its Neighbors

Political Science Problems in conduct of public elections - Political parties and political system in India - Public awareness & General administration - Welfare oriented Govt. schemes, their utility

Geography Geographical landmarks

Economics Current socio-economic problems

Science Latest inventions on science & technology

UNIT - III. Geography

Earth and Universe - Solar system - Monsoon, rainfall, weather & climate - Water resources - rivers in India - Soil, minerals & natural resources - Forest & wildlife - Agricultural pattern – Transport including surface transport & communication - Social geography – population-density and distribution - Natural calamities-Disaster Management.

UNIT - IV. History and culture of India and Tamil Nadu

Indus valley civilization- Guptas, Delhi Sultans, Mughals and Marathas - Age of Vijayanagaram and the Bahmanis - South Indian history - Culture and Heritage of Tamil people - India since independence- Characteristics of Indian culture - Unity in diversity –race, colour, language, custom - India-as secular state - Growth of rationalist, Dravidian movement in TN - Political parties and populist schemes.

UNIT - V. INDIAN POLITY

Constitution of India - Preamble to the constitution - Salient features of constitution - Union, state and territory - Citizenship-rights amend duties - Fundamental rights - Fundamental duties - Human rights charter - Union legislature – Parliament - State executive - State Legislature – assembly - Local government – Panchayat Raj – Tamil Nadu - Judiciary in India – Rule of law/Due process of law – Elections - Official language and Schedule.

UNIT - VI. INDIAN ECONOMY

Nature of Indian economy - Five-year plan models-an assessment - Land reforms & agriculture - Application of science in agriculture - Industrial growth - Rural welfare oriented programmes - Social sector problems – population, education, health, employment, poverty - Economic trends in Tamil Nadu

INDIAN NATIONAL MOVEMENT

National renaissance - Emergence of national leaders - Gandhi, Nehru, Tagore - Different modes of agitations - Role of Tamil Nadu in freedom struggle Rajaji, V.O.C, Periyar, Bharathiar & others

UNIT - VII APTITUDE & MENTAL ABILITY TESTS

Conversion of information to data - Collection, compilation and presentation of data - Tables, graphs, diagrams - Analytical interpretation of data - Simplification –Percentage -Highest Common Factor (HCF) - Lowest Common Multiple (LCM)- Ratio and Proportion -Simple interest - Compound interest - Time and Work Logical Reasoning – Puzzles - Visual Reasoning - Number Series.

