

# TEST SERIES SCHEDULE

## 2025

**TNPSC**

**AE**



**MECHANICAL**

Sl. No	Subject	Test Series Name	No. of Questions
1	MECHANICAL, KINETICS AND DYNAMICS UNIT – I	STATICS OF PARTICLES, EQUILIBRIUM OF RIGID BODIES, MECHANISM OF DEFORMABLE BODIES, PROPERTIES OF SURFACES AND SOLIDS, CENTROID, CENTRE OF GRAVITY, DYNAMICS OF PARTICLES, ELEMENTS OF RIGID BODY DYNAMICS, BASICS OF MECHANISMS	50
2	MECHANICAL, KINETICS AND DYNAMICS UNIT – I	KINEMATICS OF MECHANISMS, GYROSCOPE, GEARS AND GEAR TRAINS, FLY WHEELS AND GOVERNORS, BALANCING OF ROTATING AND RECIPROCATING MASSES, FRICTION IN MACHINE ELEMENTS, FORCE ANALYSIS, BALANCING, SINGLE DEGREE FREE VIBRATION, FORCED VIBRATION, MECHANISMS FOR VIBRATION CONTROL, EFFECT OF DAMPING, VIBRATION ISOLATION, RESONANCE, CRITICAL SPEED OF SHAFT.	50
3	GS -AE001 INDIAN ECONOMY	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	100
4	STRENGTH OF MATERIALS AND DESIGN UNIT – II	STRESS, STRAIN AND DEFORMATION OF SOLIDS, COMBINED STRESSES, THEORIES OF FAILURES, TRANSVERSE LOADING ON BEAMS, STRESSES IN BEAMS, TORSION, DEFLECTION OF BEAMS, ENERGY PRINCIPLES, THIN CYLINDERS AND THICK CYLINDERS, SPHERICAL SHELLS	50

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5	STRENGTH OF MATERIALS AND DESIGN UNIT - II	FUNDAMENTALS OF DESIGN FOR STRENGTH AND STIFFNESS OF MACHINE MEMBERS, DESIGN OF SHAFTS AND COUPLINGS, DESIGN FOR STATIC AND DYNAMIC LOADING, DESIGN OF FASTENERS AND WELDED JOINTS, REVERTED JOINTS, DESIGN OF SPRINGS, DESIGN OF BEARINGS, DESIGN OF FLYWHEELS, DESIGN OF TRANSMISSION SYSTEMS FOR FLEXIBLE ELEMENTS, SPUR GEARS AND PARALLEL AXIS HELICAL GEARS, BEVEL GEARS, WORM GEARS AND CROSSED HELICAL GEARS, DESIGN OF SINGLE AND TWO STAGE SPEED REDUCERS, DESIGN OF CAM, CLUTCHES AND BRAKES, DESIGN OF PISTON AND CONNECTING RODS	50
6	GS - AE002 DEVELOPMENT ADMINISTRATION IN TAMIL NADU	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	100
7	FLUID MECHANICS AND TURBO MACHINERY UNIT - III	FLUID PROPERTIES, FLUID STATICS, MANOMETRY, BUOYANCY, CONTROL VOLUME ANALYSIS OF MASS, MOMENTUM AND ENERGY, FLUID ACCELERATION, DIFFERENTIAL EQUATIONS OF CONTINUITY AND MOMENTUM, BERNOULLI'S EQUATION, DIMENSIONAL ANALYSIS, VISCOUS FLOW OF INCOMPRESSIBLE FLUIDS, BOUNDARY LAYER, ELEMENTARY TURBULENT FLOW, FLOW THROUGH PIPES, HEAD LOSSES IN PIPES, BENDS.	50

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8	GS - AE003 INDIAN POLITY	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	100
9	FLUID MECHANICS AND TURBO MACHINERY UNIT - III	TURBOMACHINERY: PELTON WHEEL, FRANCIS AND KAPLAN TURBINES - IMPULSE AND REACTION PRINCIPLES - VELOCITY DIAGRAMS, PUMPS AND ITS APPLICATIONS-VALVES AND TYPES - THEORY OF JET PROPULSION- PULSE JET - RAM JET ENGINES, ONLINE CONTINUOUS FLOW MONITORING SYSTEM.	50
10	THERMAL ENGINEERING AND THERMODYNAMICS UNIT - IV	BASIC CONCEPTS, ZEROth, FIRST AND SECOND LAWS OF THERMODYNAMICS, THERMODYNAMIC SYSTEM AND PROCESSES, CARNOT CYCLE. IRREVERSIBILITY AND AVAILABILITY, BEHAVIOUR OF IDEAL AND REAL GASES, THERMODYNAMIC RELATIONS, PROPERTIES OF PURE SUBSTANCES, CALCULATION OF WORK AND HEAT IN IDEAL PROCESSES, ANALYSIS OF THERMODYNAMIC CYCLES RELATED TO ENERGY CONVERSION	50
11	GS - AE004 HISTORY, CULTURE, HERITAGE, AND SOCIO- POLITICAL MOVEMENTS IN TAMIL NADU	HISTORY OF TAMIL SOCIETY - ARCHAEOLOGICAL DISCOVERY FOR TAMIL HISTORY - TAMIL LITERATURES - SANGAM AGE TO CONTEMPORARY TIMES - IMPORTANCE OF THIRUKKURAL - SIGNIFICANCE AS A SECULAR LITERATURE - RELEVANCE TO EVERYDAY LIFE - IMPACT OF THIRUKKURAL ON HUMANITY - THIRUKKURAL AND UNIVERSAL VALUES - RELEVANCE TO SOCIO-POLITICOECONOMIC AFFAIRS, PHILOSOPHICAL CONTENT IN THIRUKKURAL	100

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12	THERMAL ENGINEERING AND THERMODYNAMICS UNIT - IV	FUEL AND COMBUSTION, FUELS CHARACTERISTICS, EMISSIONS AND CONTROLS, TESTING OF IC ENGINE-RENEWABLE SOURCES OF ENERGY. POWER ENGINEERING: STEAM TABLES, RANKINE, BRAYTON CYCLES WITH REGENERATION AND REHEAT. I.C. ENGINES: AIR-STANDARD OTTO, DIESEL CYCLES. REFRIGERATION AND AIR CONDITIONING: VAPOUR REFRIGERATION CYCLE, HEAT PUMPS, GAS REFRIGERATION, REVERSE BRAYTON CYCLE; MOIST AIR: PSYCHOMETRIC CHART, BASIC PSYCHOMETRIC PROCESSES	50
13	HEAT AND MASS TRANSFER UNIT - V	MODES OF HEAT TRANSFER - ONE DIMENSIONAL HEAT CONDUCTION, RESISTANCE CONCEPT, ELECTRICAL ANALOGY, UNSTEADY HEAT CONDUCTION, FINS DIMENSIONLESS PARAMETERS IN FREE AND FORCED CONVECTIVE HEAT TRANSFER, VARIOUS CORRELATIONS FOR HEAT TRANSFER IN FLOW OVER FLAT PLATES AND THROUGH PIPES, THERMAL BOUNDARY LAYER, EFFECT OF TURBULENCE, RADIATIVE HEAT TRANSFER, BLACK AND GREY SURFACES, SHAPE FACTORS, NETWORK ANALYSIS	50
14	GS - AE005 HISTORY, CULTURE, HERITAGE, AND SOCIO-POLITICAL MOVEMENTS IN TAMIL NADU	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	100
15	HEAT AND MASS TRANSFER UNIT - V	HEAT EXCHANGER PERFORMANCE, LMTD AND NTU METHODS. BASIC CONCEPTS OF MASS TRANSFER, DIFFUSION MASS TRANSFER, FICK'S LAW OF DIFFUSION STEADY STATE MOLECULAR DIFFUSION, CONVECTIVE MASS TRANSFER, MOMENTUM, HEAT AND MASS TRANSFER ANALOGY, CONVECTIVE MASS TRANSFER CORRELATIONS, RADIOACTIVE HEAT TRANSFER.	50
16	MATERIALS SCIENCE AND METALLURGY UNIT - VI	CONSTITUTION OF ALLOYS AND PHASE DIAGRAMS, IRON - IRON CARBIDE PHASE DIAGRAM - STEELS, CAST IRON, PHASE TRANSFORMATIONS-DIFFUSION-TTT DIAGRAM, FERROUS AND NONFERROUS ALLOYS,	50



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		HEAT TREATMENT OF FERROUS AND NON FERROUS METAL, SURFACE MODIFICATION TECHNIQUES	
17	GS - AE006 HISTORY, CULTURE OF INDIA AND INDIAN NATIONAL MOVEMENT	INDUS VALLEY CIVILIZATION - GUPTAS, DELHI SULTANS, MUGHALS, AND MARATHAS - AGE OF VIJAYANAGARAM AND BAHMANI KINGDOMS - SOUTH INDIAN HISTORY - 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	100
18	MATERIALS SCIENCE AND METALLURGY UNIT - VI	POWDER METALLURGY, NON-METALLIC MATERIALS, MECHANICAL PROPERTIES AND TESTING, CRYSTAL DEFECTS AND STRENGTHENING MECHANISMS, CONDUCTING AND SEMI CONDUCTING MATERIALS, MAGNETIC AND DIELECTRIC MATERIALS, ENGINEERING CERAMICS, ENGINEERING AND COMMODITY POLYMERS, COMPOSITES, NANO-MATERIALS	50
19	PRODUCTION TECHNOLOGY UNIT - VII	FOUNDRY TECHNOLOGY- TYPES OF PATTERN, CORES, MOULDING AND CASTING METHODS, SOLIDIFICATION, DESIGN OF CASTINGS, DEFECTS, MELTING FURNACES, HOT AND COLD WORKING, METAL FORMING PROCESSES - TYPES, DEFECTS AND REMEDIES, SHEET METAL OPERATION, METAL JOINING PROCESSES, TYPES AND DESIGN OF WELDMENT, WELDING METALLURGY, WELDING DEFECTS, CASTING, WELDING INSPECTION (NDT)	50
20	GS - AE007 HISTORY, CULTURE OF INDIA AND INDIAN NATIONAL MOVEMENT	DIFFERENT MODES OF AGITATION: GROWTH OF SATYAGRAHA AND MILITANT MOVEMENTS; COMMUNALISM AND PARTITION; CHANGE AND CONTINUITY IN THE SOCIO-CULTURAL HISTORY OF INDIA - - 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	100

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21	PRODUCTION TECHNOLOGY UNIT - VII	MANUFACTURING OF THERMO SETTING AND THERMO PLASTIC PRODUCTS, METAL CUTTING, CUTTING TOOL NOMENCLATURE, MACHINABILITY MACHINE TOOLS - CENTER LATHE, DRILLING, MILLING, GRINDING, GEAR CUTTING AND BROACHING, MACHINING TIME CALCULATION, UNCONVENTIONAL MACHINING PROCESSES, MICRO MANUFACTURING, CNC MACHINE TOOLS, MANUAL PART PROGRAMMING - MACHINING AND TURNING CENTRE	50
22	GS - AE008 GEOGRAPHY OF INDIA	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.	100
23	METROLOGY AND QUALITY CONTROL UNIT - VIII	LIMITS, FITS AND TOLERANCE, LINEAR AND ANGULAR MEASUREMENTS, INTERFEROMETRY, LASER INTERFEROMETERS - TYPES, COMPUTER AIDED INSPECTION, BASIC CONCEPT OF CMM - TYPES OF CMM, MACHINE VISION, FORM MEASUREMENT- STRAIGHTNESS- FLATNESS, ROUNDNESS	50
24	METROLOGY AND QUALITY CONTROL UNIT - VIII	SURFACE FINISH MEASUREMENT, CONTACT AND NON-CONTACT METHOD, MEASUREMENT OF POWER, FLOW AND TEMPERATURE. STATISTICAL QUALITY CONTROL, CONTROL CHARTS, ACCEPTANCE SAMPLING, RELIABILITY, TQM, 5S, ISO STANDARDS.	50
25	GS - AE009 GENERAL SCIENCE	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;	100

Sl. No	Subject	Test Series Name	No. of Questions
		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	
26	CAD / CAM / CIM / FEA UNIT - IX	FUNDAMENTALS OF COMPUTER GRAPHICS, GEOMETRIC MODELING, VISUAL REALISM, ASSEMBLY OF PARTS, CAD STANDARDS, FUNDAMENTALS OF CIM, PRODUCTION PLANNING AND CONTROL, COMPUTER AIDED PROCESS PLANNING, CELLULAR MANUFACTURING, FLEXIBLE MANUFACTURING SYSTEM AND AUTOMATED GUIDED VEHICLE SYSTEM	50
27	CAD / CAM / CIM / FEA UNIT - IX	GROUP TECHNOLOGY, PRODUCTION FLOW ANALYSIS, INDUSTRIAL ROBOTICS, ADDITIVE MANUFACTURING, JUST IN TIME(JIT), LEAN MANUFACTURING, ONE DIMENSIONAL PROBLEMS IN FEA, TWO DIMENSIONAL SCALAR VARIABLE PROBLEMS, TWO DIMENSIONAL VECTOR VARIABLE PROBLEMS, ISOMETRIC PARAMETRIC FORMULATION	50
28	GS - AE010 GEOGRAPHY OF INDIA	SIMPLIFICATION - PERCENTAGE - HIGHEST COMMON FACTOR (HCF) - LOWEST COMMON MULTIPLE (LCM) - RATIO AND PROPORTION - SIMPLE INTEREST - COMPOUND INTEREST - AREA - VOLUME - TIME AND WORK - LOGICAL REASONING - PUZZLES - DICE - VISUAL REASONING - ALPHA NUMERIC REASONING - NUMBER SERIES	100
29	INDUSTRIAL ENGINEERING AND MANAGEMENT UNIT - X	WORK STUDY - TECHNIQUES, METHOD STUDY AND WORK MEASUREMENTS - OBJECTIVES - BASIC PROCEDURE, MACHINE LOADING AND SCHEDULING, PRODUCT SEQUENCING, INVENTORY CONTROL - E O Q - QUANTITY DISCOUNTS, ABC ANALYSIS MATERIAL HANDLING SYSTEMS	50
30	INDUSTRIAL ENGINEERING AND MANAGEMENT UNIT - X	OPERATIONS RESEARCH, LINEAR PROGRAMMING, SIMPLEX METHOD, TRANSPORTATION MODEL, ASSIGNMENT MODEL CPM AND PERT, QUEUING MODELS. MANAGEMENT THEORY AND PRACTICE, PLANNING - DECISION MAKING, ORGANISING, STAFFING, MOTIVATION, LEADERSHIP, CONTROLLING, CONTROL TECHNIQUES, INDUSTRIAL SAFETY - STANDARDS - OSHA.	50

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<b>Technical</b>	<b>TEST 1</b>	<b>08.07.2025</b>	<b>200 (each)</b>
	<b>TEST 2</b>	<b>10.07.2025</b>	
	<b>TEST 3</b>	<b>12.07.2025</b>	
	<b>TEST 4</b>	<b>14.07.2025</b>	
<b>GS</b>	<b>TEST 1</b>	<b>16.07.2025</b>	<b>100 (each)</b>
	<b>TEST 2</b>	<b>18.07.2025</b>	