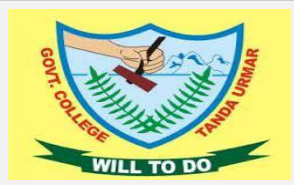




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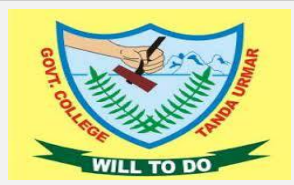
**B.Sc. Non Medical
(Department of Physics)
Pos and Cos**



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PROGRAM OUTCOMES (POs)

PO1	A graduate student in B.Sc (N.M) can pursue academic courses like B.EdM.Sc ,M.Phil and research .
PO2	The programme provides in-depth knowledge of particular subject in the field of condensed matter physics,Nuclear and particle physics,atomic and molecular physics.
PO3	The students can also take up professional courses like M.C.A.,M.B.A, which is the best option for a physics graduate who wish to pursue his/her career in I.T sector and M.B.A for those who wish to pursue their career in management field .
PO4	The students can also explore areas like Banking ,Accounting ,Civil Services and other competitive examination.



Course Outcomes (Cos)

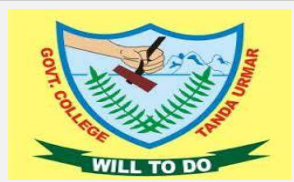
B.Sc I

Mechanics (Paper A)

CO1	Understand the analogy between translational and rotational dynamics .
CO2	Understand the Euler's Equations.
CO-3	Apply Kepler's law to describe the motion of planets and satellite in circular orbit, through the study of law of Gravitation.
CO4	Understand the concept of inertial frames, Galilean invariance concept of conservation of energy, momentum, angular momentum, Galilean and Lorentz transformations.
CO5	Describe how fictitious forces arise in a non-inertial frame.

Vibration, Waves and EM theory (Paper B)

CO1	Use a mathematical oscillator equation and wave equation, and derive these equations for certain systems.
CO2	Understand the principle of superposition of waves, so thus describe the formation of standing waves.
CO-3	Understand the motion of coupled oscillators, study of Lissajous figures and behavior of transverse, longitudinal waves.



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Electricity and Magnetism (Paper C)

CO1	Demonstrate Gauss law, Coulomb's law for the electric field, and apply it to systems of point charges as well as line, surface, and volume distributions of charges.
CO2	Apply Gauss's law of electrostatics to solve a variety of problems.
CO-3	Describe the magnetic field produced by magnetic dipoles and electric currents.
CO4	Explain Faraday-Lenz and Maxwell laws to articulate the relationship between electric and magnetic fields.

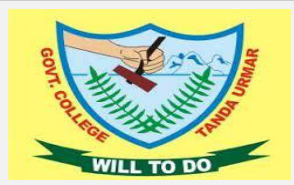
B.Sc II

Statistical Physics and Thermodynamics (Paper A)

CO1	Understand the basic ideas about probability, distribution of distinguishable particles in multiple compartments of equal and unequal sizes.
CO2	Describe the concept of macro states, microstates, thermodynamic probability, and effects of constraints on the system.
CO3	Explain M.B., B.E. and F.D. statistics and their comparison.
CO4	Demonstrate Laws of Thermodynamics, Thermodynamical processes, Carnot's cycle, PV Diagram, Maxwell's Thermodynamical relations and applications.

Optics and Lasers (Paper B)

CO1	Understand the concept of Interference, diffraction and polarization.
CO2	Explain Interference in thin films, Role of interference in anti-reflection and reason of coating on black windows in AC rooms.
CO3	Understand the difference between polarized and unpolarized light.
CO4	Explain plane polarized, circularly polarized and elliptically polarized light.



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CO5	Demonstrate construction and working of LASER and their uses on commercial bases.
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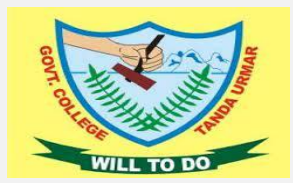
Quantum Physics (Paper C)

CO1	Demonstrate the concept of wave- particle duality along with experimental evidences.
CO2	Solve various problems related to probability, Hermitian operator and expectation values for position and momentum operator.
CO3	Study the spectroscopy of various elements using transition levels.
CO4	Demonstrate the fine and hyperfine structures and various coupling techniques.
CO5	Explain the concept of principal, spin, orbital and magnetic quantum numbers.

B.Sc III

Condensed Matter Physics (Paper A)

CO1	Understand various crystal structures, primitive cells, bravais lattices and reciprocal lattices.
CO2	Draw the cubic structures of Diamond and NaCl.
CO3	Solve the problems for Brillouine zones.
CO4	Demonstrate the difference between Conductors, Semiconductors and insulators.
CO5	Understand the concept of Lattice Dynamics.
CO6	Explain electrical and magnetic properties of materials on the basis of various theories.



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Electronics and Solid State Devices (Paper B)

CO1	Demonstrate CRO.
CO2	Draw the circuitry of Clippers, Rectifiers, Filters and Transistors (CE, CB, CC, FET etc.).
CO3	Solve the problems related to various circuitries.
CO4	Understand Op-Amps and Gates.
CO5	Understand various applications of transistors, filters, rectifiers, gates and Op-Amps

Nuclear and Particle Physics (Paper C)

CO1	Understand different theories about Nucleus and Nuclear properties.
CO2	Understand different Models which are used to study the nucleus.
CO3	Explain various detectors used to detect particles.
CO4	Understand the concept of radioactivity and nuclear reactions.
CO5	Understand the birth of universe, its constituent particles and their properties.