

**ASD GOVERNMENT DEGREE COLLEGE FOR WOMEN (A), KAKINADA**  
**DEPARTMENT OF PHYSICS**  
**ACADEMIC PLAN (2020-21)**

**CLASS: I B.SC(MPC,MPCS) ,SEMESTER-1**

**TITLE OF THE PAPER : MECHANICS ,WAVES AND OSCILLATIONS**

S.NO	MONTH	NAME OF THE UNIT (TOPIC)
1	january	Unit-1 : Mechanics of particles and Mechanics of the Rigid bodies
2	february	Unit-2: Motion in a central force field
3	march	Unit-3: Relative Mechanics
4	april	Unit-4: Un damped, Damped and forced Oscillations Coupled Oscillations
5	may	Unit-5: Vibrating strings Ultrasonics

**CLASS: I B.SC(MPC,MPCS) ,SEMESTER-2**

**TITLE OF THE PAPER : WAVE OPTICS**

S.NO	MONTH	NAME OF THE UNIT(TOPIC)
1	june	Unit-1 : Interference of Light
2	july	Unit-2: Diffraction of Light
3	auguest	Unit-3: Polarisation of Light
4	september	Unit-4: Abberations and Fiber Optics
5	october	Unit-5: Lasers and Holography

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**CLASS: II B.SC(MPC,MPCS) ,SEMESTER-3**

**TITLE OF THE PAPER : HEAT AND THERMODYNAMICS**

S.NO	MONTH	NAME OF THE UNIT (TOPIC)
1	november	Unit-1 : Kinetic theory of Gases
2	december	Unit-2: Thermodynamics
3	january	Unit-3: Thermodynamic potentials and Maxwell's Equations
4	february	Unit-4: Low temperature Physics
5	march	Unit-5: Quantum Theory of Radiation

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**CLASS: II B.SC(MPC,MPCS) ,SEMESTER-4,PAPER-4**

**TITLE OF THE PAPER : ELECTRICITY,MAGNETISM & ELECTRONICS**

S.NO	MONTH	NAME OF THE UNIT (TOPIC)
1	APRIL	Unit-1 : Electric field intensity and Potentials Dielectrics
2	MAY	Unit-2: Electric fields and Magnetic fields Electromagnetic Induction
3	JUNE	Unit-3: Alternating currents and Electromagnetic waves Maxwell's Equations
4	JULY	Unit-4: Basic Electronics
5	AUGUEST	Unit-5: Digital Electronics

CLASS: II B.SC(MPC,MPCS) ,SEMESTER-4,PAPER-5

TITLE OF THE PAPER : MODERN PHYSICS

S.NO	MONTH	NAME OF THE UNIT(TOPIC)
1	NOVEMBER	Unit-1 : Atomic and Molecular Physics
2	DECEMBER	Unit-2: Matter waves & Uncertainty Principle
3	JANUARY	Unit-3: Quantum(Wave) Mechanics
4	FEBRUARY	Unit-4: General properties of Nuclei Radioactivity Decay
5	MARCH	Unit-5: Crystal Structure Super Conductivity

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CLASS: III B.SC(MPC,MPCS) ,SEMESTER-5,PAPER-5

TITLE OF THE PAPER : ELECTRICITY,MAGNETISM & ELECTRONICS

S.NO	MONTH	NAME OF THE UNIT (TOPIC)
1	APRIL	Unit-1 : Electric field intensity and Potentials Dielectrics
2	MAY	Unit-2: Electric fields and Magnetic fields Electromagnetic Induction
3	JUNE	Unit-3: Alternating currents and Electromagnetic waves Maxwell's Equations
4	JULY	Unit-4: Basic Electronics
5	AUGUST	Unit-5: Digital Electronics

**CLASS: III B.SC(MPC,MPCS) ,SEMESTER-5,PAPER-6**

**TITLE OF THE PAPER : MODERN PHYSICS**

S.NO	MONTH	NAME OF THE UNIT(TOPIC)
1	APRIL	Unit-1 : Atomic and Molecular Physics
2	MAY	Unit-2: Matter waves & Uncertainty Principle
3	JUNE	Unit-3: Quantum(Wave) Mechanics
4	JULY	Unit-4: General properties of Nuclei Radioactivity Decay
5	AUGUST	Unit-5: Crystal Structure Super Conductivity

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**CLASS: III B.SC(MPC,MPCS) ,SEMESTER-6,PAPER-VII C -ELECTIVE**

**TITLE OF THE PAPER : RENEWABLE ENERGY**

S.NO	MONTH	NAME OF THE UNIT (TOPIC)
1	APRIL	Unit-1 : Introduction to Energy Environmental Effects
2	MAY	Unit-2: Global Energy Scenario Indian Energy Scene
3	JUNE	Unit-3: Solar Energy Wind Energy
4	JULY	Unit-4: Ocean Energy Hydrogen Energy
5	AUGUST	Unit-5: Bio-Energy

**CLASS: III B.SC(MPC,MPCS) ,SEMESTER-6,PAPER-CLUSTER-1**

**TITLE OF THE PAPER : SOLAR THERMAL AND PHOTO VOLTAIC ASPECTS**

S.NO	MONTH	NAME OF THE UNIT(TOPIC)
1	APRIL	Unit-1 : Basics of Solar Radiation Radiative properties and Characteristics of materials
2	MAY	Unit-2: Flat-Plate collectors(FPC)
3	JUNE	Unit-3: Solar Photo Voltaic cell(PV cell)
4	JULY	Unit-4: Solar PV Systems
5	AUGUST	Unit-5: Solar thermal applications

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**CLASS: III B.SC(MPC,MPCS) ,SEMESTER-6,PAPER-VIII,CLUSTER-2**

**TITLE OF THE PAPER : WIND,HYDRO AND OCEAN ENERGIES**

S.NO	MONTH	NAME OF THE UNIT (TOPIC)
1	APRIL	Unit-1 : Introduction to wind energy
2	MAY	Unit-2: Wind Energy conversion systems
3	JUNE	Unit-3: Wind energy Applications
4	JULY	Unit-4: Small Hydro power Systems
5	AUGUST	Unit-5: Ocean Thermal.Tidal and Wave energy Systems Tidal Energy

CLASS III B.SC(MPC,MPES) ,SEMESTER-8,PAPER-III CLUSTER-1

TITLE OF THE PAPER : ENERGY STORAGE DEVICES

S.NO	MONTH	NAME OF THE UNIT(TOPIC)
1	APRIL	Unit-1 : Energy Storage
2	MAY	Unit-2: Electro chemical Energy storage systems
3	JUNE	Unit-3: Magnetic and Electrical energy storage systems
4	JULY	Unit-4: Fuel cell
5	AUGUST	Unit-5: Types of Fuel cells