

Course Code/Name : PH3202 – Physics for Electrical Engineering
Regulation : 2021

UPC – Student Planner

Slot	Unit .No	Name of the Unit	Questions	CO Mapping	Grade	
					A	B
1	IV	Optical Properties of Materials	1. Light Detector & Solar Cell(8+8) 2. LED & OLED(8+8) 3. Laser Diode(8) 4. Electro-Optic Modulator(8) 5. Switching Device(SEED)(8) 6. Plasmonics(8)	C110.4	1 2 3 4 5 -	6
2	II	Electrical & Magnetic Properties of Materials	1. Electrical & Thermal Conductivity(12) 2. Density of Energy States(16) 3. Effective Mass(8) 4. Para magnetism in Conduction Electron(8) 5. Classification of Magnetic Materials(8) 6. Exchange Interaction(8) 7. GMR Device(8) 8. Quantum interference device-SQUID(8) 9. Fermi Distribution Function(8) 10. Tight Binding Approximation(8)	C110.2	1 2 3 4 5 6 7 8 - -	9 10
3	V	Nano Devices	1. Quantum Confinement & Density of Energy state of Solids.(16) 2. SET(10) 3. Carbon Nano Tube.(12) 4.SPINTRONICS & Spin FET(10) 5. Zener Bloch Oscillator(10) 6. Semiconductor Photonic Structure.(12)	C110.5	1 2 3 4 5 -	6
4	I	Dielectric Materials	1. Total Polarization.(16) 2. Internal Field.(16) 3. Gauss Law.(12) 4. Capacitor & its Types.(16) 5. Piezo, Pyro & Ferro Electric Materials.(8) 6. Dielectric Breakdown.(10)	C110.1	1 2 3 4 5	6
5	III	Semiconductor and Transport Physics	1. Intrinsic Carrier Concentration(16) 2. Carrier Concentration of N-Type Semiconductor(16) 3. Carrier Concentration of P-Type Semiconductor(16) 4. Hall Effect(16) 5. Schottky Diode & Ohmic Contacts(8+8)	C110.3	1 2 3 4 5	

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