A.V.E.S.

DEGLOOR COLLEGE,DEGLOOR

DEPT. OF PHYSICS

YEAR:2018-19

ANNUAL TEACHING PLAN

CLASS:B.Sc.III Year

NAME OF TEACHER: Dr. Bhanudas Narwade
SEMESTER : V
PAPER NAME & NO.: Quantum Mechanics

SR.NO.	TOPIC / SUB TOPIC	PLANNING			EXECUTION			REMARK
		Expe. Periods	Expected Duration		Actl. Periods	Actual Duration		
			From	To		From	To	
1	**UNIT-I PARTICAL PROPERTIES OF WAVES**	12	1/7/2018	3/8/2018	11	09.07.2018	8/8/2018	
	Introduction, Photoelectric effect							
	Comton effect,de-Broglies waves,							
	Wave function, de-Broglies wave velocity,							
	Wave and Group velocities,G.P.Thomson							
	experiment, Uncertainty principal							
	Applications,Wave particle duality							
	Numerical Problems							
2	**UNIT-II SCHRODINGER'S EQUATION**	10	04.08.2018	30.08.2018	9	14/8/18	29/8/18	
	Introduction,Schrodinger's equation							
	Time dependent form,probability current							
	Expectation values,Operators, Schrodinger's							
	Equation -steady state form,							
	Eigen values and function problems							

SR.NO.	TOPIC / SUB TOPIC	PLANNING			EXECUTION			REMARK
		Expe. Periods	Expected Duration		Actl. Periods	Actual Duration		
			From	To		From	To	
3	UNIT-III APPLICATION OF QUANTUM MECHANICS	8	1/9/2018	20/9/18	9	30/8/18	5/9/2018	
	Introduction,partical in a box							
	Energy quantization,wave function,							
	Momentum quantization,Harmonic oscillator							
	Energy level,Particle in 3-D box							
4	UNIT-IV QUANTUM THEORY OF *H* ATOM	10	21.9.2018	5/10/2018	8	6/9/2018	24/9/18	
	Schrodinger's equation for the Hydrogen atom							
	in spherical polar co-ordinates							
	separation of variables,							
	Quantum Numbers-							
	Total quantum numbers,							
	Orbital quantum numbers,magnetic quantum							
	numbers, spin quantum numbers							

Name and Sign. Of Teacher

H.O.D.
Dept. of Physics

Principal
Degloor College

Principal
A V Education Society's
Degloor College Degloor

DEGLOOR COLLEGE,DEGLOOR

DEPT. OF PHYSICS **YEAR:2018-19**

ANNUAL TEACHING PLAN **CLASS:B.Sc.II Year**

NAME OF TEACHER : **Dr. Bhanudas Narwade**
SEMESTI III
PAPER NAME & NO.: **Waves, Acoustics & Ultrasonics**

SR.NO.	TOPIC / SUB TOPIC	PLANNING			EXECUTION			REMARK
		Expe. Periods	Expected Duration		Actl. Periods	Actual Duration		
			From	To		From	To	
1	**UNIT-I WAVES**	10	01.07.2018	1/25/1900	8	1/7/2018	25/7/2018	
	Introduction, Relation between wave velocity							
	and partical velocity,Differntial equation of							
	wave motion,Energy of progressive wave							
	Equation of vibrating string,Velocity							
	of transvrse wave,Frequency and period							
	Numerical problems							
2	**UNIT-II STATIONARY WAVES**	11	27.07.2018	16-8-2018	9	26/7/2018	10/8/2018	
	Analytical treatment of stationary waves							
	Pressure and density at nodes and antinodes							
	Distribution of energy in stationary wave							
	Energy not transferred							

SR.NO.	TOPIC / SUB TOPIC	PLANNING			EXECUTION			REMARK
		Expe. Periods	Expected Duration		Actl. Periods	Actual Duration		
			From	To		From	To	
3	**UNIT-III FREE AND FORCED VIBRATIONS**	11	17/8/2018	8/9/2018	10	11/8/2018	31/8/18	
	Free forced vobrationd, Resonance							
	Energy of oscillatory motion, Damped SHM							
	Aperiodic, critically damped motion							
	Effect of damping, Sharpness of resonance							
4	**UNIT-IV ACOUSTICS AND ULTRASONICS**	11	9/9/2018	5.10.2018	10	1/9/2018	23/9/18	
	ACOUSTICS							
	Reverbration Reverbration time,							
	Sabin's formula,absorption coefficient							
	determination of absorbtion coefficient							
	conditions for good acoustics							
	ULTRASONICS							
	Piezo-electric and Magnetostriction effect							
	Piezo-electric and Magnetostriction oscillator							
	Detection of ultrasonic waves							
	Acoustic grating,Kunds tube method							
	Applications of ultrasonics							

BSC

Name and Sign. Of Teacher

BSC

H.O.D.
Dept. of Physics

Principal
Degloor College

Principal
A V Education Society's
Degloor College Degloor

A.V.E.S.

DEGLOOR COLLEGE,DEGLOOR

DEPT. OF PHYSICS

YEAR:2018-19

ANNUAL TEACHING PLAN

CLASS:B.Sc.I Year

NAME OF TEACHER: Dr. Bhanudas Narwade
SEMESTER : II
PAPER NAME & NO.: HEAT AND THERMODYNAMICS

SR.NO.	TOPIC / SUB TOPIC	PLANNING			EXECUTION			REMARK
		Expe. Periods	Expected Duration		Actl. Periods	Actual Duration		
			From	To		From	To	
1	UNIT-I KINETIC THEORY OF GASES	9	15.12.2018	31/12/18	8	15/12/2019	30/12/2019	
	Mean free path							
	Transport phenomenon							
	viscosity of gas							
	Thermal conductivity							
	Diffusion							
	iInter relation between three coefficients							
2	UNIT-II LOW TEMPERATURE PHYSICS	10	01.01.2019	25/1/2019	9	1.1.19	25-1-19	
	Andrews exp. On Co2							
	Amagat's exp.							
	Porus plug exp							
	Vander-walls equation							
	crical constances							

SR.NO.	TOPIC / SUB TOPIC	PLANNING			EXECUTION			REMARK
		Expe. Periods	Expected Duration		Actl. Periods	Actual Duration		
			From	To		From	To	
3	UNIT-III THERMODYNAMICS AND RELATIONS	12	27/1/2019	25/1/2019	10	29-1-19	6-2-19	
	First law,second law of thermodynamics							
	Carnot's cycle and engine ,third law							
	Maxwells equations, Clausius -Clyperon rel'n							
	T-dS Equation, Thermodynamic potentials							
4	UNIT-IV THEORY OF RADIATION	9	26/1/2019	10/3/2019	6 8	6-2-19	23-2-19	
	Black body Radiation							
	Spetral Distribution, Energy density							
	Planck's law							
	Wein's distribution law							
	Rayleigh Jeans law							
	Stefan-Boltzmann law							
	Weins displacement law							

BSL

Name and Sign. Of Teacher

BSL

H.O.D.
Dept. of Physics

Principal
Degloor College

A.V.E.S.

DEGLOOR COLLEGE,DEGLOOR

DEPT. OF PHYSICS **YEAR:2018-19**

ANNUAL TEACHING PLAN **CLASS:B.Sc.II Year**

NAME OF TEACHER : **Dr. Bhanudas Narwade**
SEMESTER IV
PAPER NAME & NO.: **OPTICS AND LASSERS**

SR.NO.	TOPIC / SUB TOPIC	PLANNING			EXECUTION			REMARK
		Expe. Periods	Expected Duration		Actl. Periods	Actual Duration		
			From	To		From	To	
1	**UNIT-I Cardinal points of optical system**	10	15.12.2018	31/12/18	9	15/12/2018	1/1/2019	
	Cardinal points of optical system							
	Cardinal points of co-axial lens optical system							
	Eyepieces							
	Huygens eyepieces							
	Ramsden eyepiece							
	and their cardinal points							
2	**UNIT-II Interference and diffraction**	14	01.01.2019	1/2/2019	12	1.1.19	2.2.19	
	Newtons ring							
	Michelsons interferrometer							
	Determination of wavelengths							
	Fresnel and Fraunhoffer difraction							
	due to single and double slit and RP							

SR.NO.	TOPIC / SUB TOPIC	PLANNING			EXECUTION			REMARK
		Expe. Periods	Expected Duration		Actl. Periods	Actual Duration		
			From	To		From	To	
3	**UNIT-III Polarisation**	10	2/2/2019	25/2/2019	10	2-2-19	15-2-19	
	Brewster law,Malus law							
	Double refraction ,Nicol Prism							
	half and quarter wave plate							
	Specific rotation							
	Lauretz half shade method							
4	**UNIT-IV -Lassers**	9	26/2/2019	10/3/2019	7	15-2-19	22-2-19	
	Spontanious emission							
	Stimmulated Emission							
	Einsteins coefficients							
	Population inversion							
	optical and electrical pumping							
	Properties of LASSER							
	Helium -Neon LASSER							
	Diode LASSER							

SSR

Name and Sign. Of Teacher

SSR

H.O.D.
Dept. of Physics

Principal
Degloor College