

A.V.E.S.

DEGLOOR COLLEGE, DEGLOOR**DEPT. OF PHYSICS****ANNUAL TEACHING PLAN**

YEAR:2019-20

CLASS:B.Sc.II Year


NAME OF TEACHER : Dr. Bhanudas Narwade


SEMEST 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	11	01.07.2019	24/7/2019	10	1/7/2019	26/7/2019	
	Introduction, Relation between wave velocity and partical velocity, Differential 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	10	27.07.2019	16-8-2019	9	27/7/2019	13/8/2019	
	Analytical treatment of stationary waves							
	Pressure and density at nodes and antinodes							
	Distribution of energy in stationary wave							
	Energy not transferred							

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3	UNIT-III FREE AND FORCED VIBRATIONS	11	16/8/2019	10/9/2019	10	13/8/2019	14/9/19	
	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	9/9/2019	5.10.2019	10	1/9/2019	23/9/19	
	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							

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DEGLOOR COLLEGE, DEGLOOR

DEPT. OF PHYSICS
ANNUAL TEACHING PLAN

YEAR:2019-20

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 PARTIAL PROPERTIES OF WAVES	13	1/7/2019	3/8/2019	13	1/7/2019	2/8/2019	
	Introduction, Photoelectric effect							
	Compton effect, de-Broglie waves,							
	Wave function, de-Broglie wave velocity,							
	Wave and Group velocities, G.P. Thomson							
	experiment, Uncertainty principle							
	Applications, Wave particle duality							
	Numerical Problems							
2	UNIT-II SCHRODINGER'S EQUATION	10	04.08.2019	30.08.2019	9	3/8/2019	31/8/19	
	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
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			From	To		From	To	
3	UNIT-III APPLICATION OF QUANTUM MECHANICS	9	1/9/2019	20/9/19	8	30/8/18	14/9/19	
	Introduction,partial 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	11	21.9.2019	5/10/2019	10	15/9/2019	30/9/19	
	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							

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YEAR:2019-20
 CLASS:B.Sc.I Year

NAME OF TEACHER: Dr. Bhanudas Narwade
 SEMESTER : Annual pattern
 PAPER NAME & NO.: Practical Course (V -Paper)

SR.NO.	TOPIC / SUB TOPIC	PLANNING			EXECUTION			REMARK
		Expe. Periods	Expected Duration		Actl. Periods	Actual Duration		
			From	To		From	To	
	NAME OF EXPERIMENT							
1	Explanation : n by spiral springl	3	1/7/2019	1/7/2019	3	1/7/2019	1/7/2019	
2	Y by spiral spring							
3	n by static torsion							
4	Experiments : n by spiral springl	9	8/7/2019	9/8/2019	9	8/7/2019	9/8/2019	
5	Y by spiral spring							
6	n by static torsion							
7	Revision	3	16/8/2019	16/8/2019	3	16/8/2019	16/8/2019	
8	Explanation : n- Maxwel needle	3	23/8/2019	23/8/2019	3	23/8/2019	23/8/2019	
9	Y by bending							
10	n by Poiseuille's method							
11	Experiments : n- Maxwel needle	9	30/8/2019	18/9/2019	9	30/8/2019	18/9/2019	
12	Y by bending							
13	n by Poiseuille's method							
14	S.T. by Jagers method	3	12/12/2019	12/12/2019				
15	Field along the axis of circular coil							
16	PN Junction diode	6	19/12/2019	26/12/2019				
17	Zeener diode							
18	Revision	3	3/1/2020	3/1/2020				

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YEAR:2019-20

CLASS:B.Sc.III Year

NAME OF TEACHER: Dr. Bhanudas Narwade
SEMESTER : VI
PAPER NAME & NO.: ATOMIC, MOLECULAR AND NUCLEAR PHYSICS

SR.NO.	TOPIC / SUB TOPIC	PLANNING			EXECUTION			REMARK
		Expe. Periods	Expected Duration		Actl. Periods	Actual Duration		
			From	To		From	To	
1	UNIT I ATOMIC PHYSICS	15	5/12/2019	2/1/2020	18	4/12/2019	4/1/2020	
	Vector atom model, quantum no., LS coupling							
	jj coupling, Pauli's exclusion principle							
	selection rule, intensity rule,							
	Zeeman effect,							
	Stark effect							
	Anomalous Zeeman effect							
2	UNIT-II MOLECULAR SPECTRA	10	3/1/2020	22/1/2020	7	5/1/2020	22-1-2020	
	Regions of em spectra							
	Classification molecular spectra							
	pure rotational spectra							
	rotational-vibrational spectra							
	Raman effect							

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3	UNIT-III NUCLEAR FISSION AND REACTION	10	22/1/2020	15/2/2020	8	25-1-20	3-2-20	
	Nuclear fission							
	Fission product							
	Energy release in fission							
	Kinds of reaction and conservaton laws ans kinematics							
4	UNIT-IV NUCLEAR ENERGY SOURCES	10	15/2/2020	10/3/2020	8	3-2-20	27-2-20	
	Nuclear fission as energy source							
	Thermal nuclear reactor							
	Neutron cycle							
	Energy production in stars controlled thermonuclear reaction							

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ANNUAL TEACHING PLANYEAR:2019-20
CLASS:B.Sc.I YearNAME 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 THERMOMETRY	9	7/12/2019	31/12/19	6	9/12/2019	26/12/2019	
	Types of thermometer, centigrade and							
	Fahrenheit scale, and relations,							
	Platinum resistance Thermometer							
	Seebeck effect							
2	UNIT-II REAL GASES AND BEHAVIOUR	12	01.01.2020	22/1/2020	11	27/12/2019	23/1/2020	
	Andrews exp. On Co ₂							
	Amagat's exp.							
	Porus plug exp							
	Vander-walls equation							
	critical constants							

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3	UNIT-III TRANSPORT PHENOMENON IN GASES	9	22/1/2020	10/2/2020	7	24.1.20	1.2.20	
	Molecular collision ,Mean free path							
	Transport phenomenon							
	viscosity of gas							
	Thermal conductivity Diffusion							
	inter relation between three coefficients							
4	UNIT-IV THERMODYNAMICS AND RELETIONS	12	10/2/2020	10/3/2020	12	10.2	26.2.20	
	First law,second law of thermodynamics							
	Carnot's cycle and engine ,third law							
	Maxwells equations, Clausius -Clyperon rel'n							
	T-dS Equation, Thermodynamic potentials							

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YEAR:2019-20
CLASS:B.Sc.II Year

NAME OF TEACHER: Dr. Bhanudas Narwade
SEMESTER : Annual pattern
PAPER NAME & NO.: Practical Course (X Paper)

SR.NO.	TOPIC / SUB TOPIC	PLANNING			EXECUTION			REMARK
		Expe. Periods	Expected Duration		Actl. Periods	Actual Duration		
			From	To		From	To	
	NAME OF EXPERIMENT							
1	g by Katers pendulum	15	1/7/2019	31/7/2019	12	1/7/2019	27/7/2019	
2	M.I.of flywheel							
3	Y -by Cantilever							
4	n- by Torsional pendulum	15	1/8/2019	31/8/2019	15	1/8/2019	31/8/2019	
5	Y &n by Searle's method							
6	S.T. by Fergusson method							
7	Revision	9	13/9/2019	20/9/2019	9	13/9/2019	27/9/2019	
8	Frequency of A.C. by sonometer							
9	Calibration of spectrometer							
10	RI BY SPECTROMETER	18	6/12/2019	17/1/2020	18	4/12/2019	24-1-2020	
11	wavelength by grating							
12	Helhmotz resonator							
13	Conductivity by Sears method	6	23/1/2020	30/1/2020				
14	Revision	6	7/2/2020	14/2/2020		25-1-2020		

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