

Department of _____ : Physics
Name of the Lecturer : Dr. P. B. Sandhya Sri

ANNUAL CURRICULAR PLAN : 2022 - 2023



NAAC - B
AVANIGADDA - 521121, ANDHRA PRADESH

GOVERNMENT DEGREE COLLEGE



ANNUAL CURRICULAR PLAN

Name of the Department :		Name of the Lecturer : Dr - P.B. Sandhya Sri		Class : II BSc		Year : 2022-23		Paper : III Thermodynamics		Remarks	
Month	Week	Hours available	Syllabus/Topic	Value Addition provided/Taught	Curricular Activity		Co-curricular Activity		If not alternate date	Whether conducted	If not alternate date
					Activity Conducted	Hours allotted	Activity Conducted	Hours allotted			
November	1 st week	3	Law of thermal radiation	MCA	-	Yes	-				
	2 nd week	4	Quintessence of matter	MCA							
	3 rd week	4	Thermodynamics	Assessm				02	Yes		
	4 th week	4	Second law of thermodynamics	Additional problem							
	5 th week	4	Entropy - Unimol	Additional problem							
December	1 st week	4	Kinetic theory of gases	-				02	Yes		
	2 nd week	4	Mean free path	-	01	Yes		02	Yes		
	3 rd week	4	Transport phenomena	MCA & problem							
	4 th week	2	Thermodynamic's	MCA				01	Yes		
	5 th week										

Signature of the Lecturer

P.B. Sandhya Sri

Signature of the Department In-Charge

P.B. Sandhya Sri

Principal
 GOVT. DEGREE COLLEGE
 AVANIGADDA, Krishna Dt 521121

ANNUAL CURRICULAR PLAN

GOVERNMENT DEGREE COLLEGE, AVANIGADDA - 521121

Name of the Department : *Physics*

Name of the Lecturer : *Dr. P. B. Sandhya Sri*

Class : *II BSc (S)*

Year : *2022-23*

Paper : *III Thermodynamics*

Month	Week	Hours available	Syllabus/Topic	Additional Input/Value Addition provided/Taught	Curricular Activity				Co-curricular Activity			
					Activity Conducted	Hours allotted	Whether conducted	If not alternate date	Activity Conducted	Hours allotted	Whether conducted	If not alternate date
<i>January</i>	1 st week	4	Derivation of Maxwell's thermodynamic relations	MCA	Assign	01	Yes	-	Student Seminar	03	Yes	
	2 nd week	4	Application to Clausius - Chapman eqn	Exercs Problems.								
	3 rd week	4	Rangal Holidays.	-	-	-	-	-				
	4 th week	4	Adiabatic demagnetisation	MCA	Assign	01	Yes	-	Student Seminar	03	Yes	
	5 th week	4	Quantum theory of Radiation.	MCA								
<i>February</i>	1 st week	4	Planck's Black Body radiation	Exercs of the theory	Assign	01	Yes	-				
	2 nd week	4	Revision	-								
	3 rd week	4	Revision	-								
	4 th week											
	5 th week											

Signature of the Lecturer
P. B. Sandhya Sri

Signature of the Department In-Charge
P. B. Sandhya Sri

Signature of the Department In-Charge
P. B. Sandhya Sri
GOVT. DEGREE COLLEGE, AVANIGADDA, AVANIGADDA, KARNATAKA

ANNUAL CURRICULAR PLAN

GOVERNMENT DEGREE COLLEGE, AVANIGADDA - 521121

Name of the Department : *Physics*

Name of the Lecturer : *Dr. P. B. Samalaya Sri*

Class : *III BSc
MC & MPC*

Year : *2022 - 23*

Paper : *6C - Applications of Electricity & Magnetism*

Remark

Month	Week	Hours available	Syllabus/Topic	Additional Input/ Value Addition provided/Taught	Curricular Activity				Co-curricular Activity				Remark	
					Activity Conducted	Hours allotted	Whether conducted	If not alternate date	Activity Conducted	Hours allotted	Whether conducted	If not alternate date		
<i>February January</i>	1 st week	4	<i>Resistors & Capacitors</i>	<i>ALGEBRA MCQ</i>	<i>Abstract</i>	1	<i>Yes</i>	-						
	2 nd week	4	<i>Inductors, Applications series resonant circuit</i>											
	3 rd week	4	<i>DC & AC Sources, load acid, NiMH batteries</i>	<i>MCQ</i>										
	4 th week	4	<i>Lithium LiPo batteries</i>	<i>MCQ</i>	<i>group forum</i>	1	<i>Yes</i>	-						
	5 th week	2	<i>COMT - Voltage and current sources</i>											
<i>March December February</i>	1 st week	2	<i>5m PS in computer. AC Power generator</i>											
	2 nd week	3	<i>transformer step up/down</i>	<i>confructor</i>	<i>test</i>	1	<i>Yes</i>							
	3 rd week	4	<i>Relation b/w turns with core, Transformer in EPS</i>											
	4 th week	2	<i>Single phase wcbw</i>	<i>confructor</i>										
	5 th week	2	<i>Applications of wcbw</i>											

P B S
Signature of the Lecturer

P B S
Signature of the Department In-Charge

P B S
Signature of the Principal
GOVT. DEGREE COLLEGE
AVANIGADDA, Krishna Dt. 521121

ANNUAL CURRICULAR PLAN

GOVERNMENT DEGREE COLLEGE, AVANIGADDA - 521121

Name of the Department : **Physics**

Name of the Lecturer : **Dr. P. B. Sandhuvasu**

Class : **SI BSc MCA & MPh**

Year : **2022-23**

Paper : **6C Applications of Electronics**

Month	Week	Hours available	Syllabus/Topic	Additional Input/Value Addition provided/Taught	Curricular Activity				Co-curricular Activity					
					Activity Conducted	Hours allotted	Whether conducted	If not alternate date	Activity Conducted	Hours allotted	Whether conducted	If not alternate date		
March January	1 st week	3	DC regulated Power Supply SV RPS	MCA										
	2 nd week	2	design of step up/down transformer	Assign (PPT)	Assign	01	Yes		Student seminars	1	Yes			
	3 rd week	2	design of FM Radio											
	4 th week	4	checkings of O/P of different elements	Assign (PPT)					Student Seminars	1	Yes			
	5 th week	1	Design of amplifier											
February	1 st week	3	DC generator Principle working											
	2 nd week	4	Construction of single DC generator.	Assign (PPT)	Assign	01	Yes		Student Seminars	1	Yes			
	3 rd week	4	Difference b/w DC/AC generators Penetration											
	4 th week	—												
	5 th week	—												

P. B. Sandhuvasu
Signature of the Lecturer

P. B. Sandhuvasu
Signature of the Department In-Charge

S. B. Sandhuvasu
Signature of the Principal
AVANIGADDA, Krishna Dt., 521121

ANNUAL CURRICULAR PLAN

GOVERNMENT DEGREE COLLEGE, AVANIGADDA - 521121

Name of the Lecturer : *Dr. P. B. Sandhya Devi*

Class : *II BSc*

Name of the Department : *Physics*

Year : *2022-23*

Paper : *Modern Physics*

Month	Week	Hours available	Syllabus/Topic	Additional Input/ Value Addition provided/ Taught	Curricular Activity				Co-curricular Activity					
					Activity Conducted	Hours allotted	Whether conducted	If not alternate date	Activity Conducted	Hours allotted	Whether conducted	If not alternate date		
November	1 st week	4	vector algebra model Stem & endnote part	MCA	ASST	4	Yes	-						
	2 nd week	4	Quantum no Angular moment coupling shows											
	3 rd week	4	Spectral line selection & intensity rules Fine structure of P line of Na	MCA						Project	1	Yes	-	
	4 th week	4	Zeeman effect anomalous Zeeman effect		ASST	1	Yes	-						
	5 th week	2	Applications of laser Basic Postulates of QM wave length experiment.	MCA Problems.										
December	1 st week	2	Davis son Scattering exp-1 Photo & Compton effects Interference in matter waves											
	2 nd week	3	Diffraction at single edge Fresnel diffraction Rayleigh's criteria							Group Discus	1	Yes	-	
	3 rd week	4	SE wave eqn, Physical interpretation of wave fn	MCA	ASST	1	Yes	-						
	4 th week	2	1-D potential well box infinite height											
	5 th week	4	Simple harmonic oscillator general properties of nuclear magnets effect, BE	MCA										

P. B. Sandhya Devi
Signature of the Lecturer

P. B. Sandhya Devi
Signature of the Department In-Charge

P. B. Sandhya Devi
Principal
Government Degree College
Avanigadda, Krishna Dt. 521121.

ANNUAL CURRICULAR PLAN

GOVERNMENT DEGREE COLLEGE, AVANIGADDA - 521121				Name of the Department : <u>Physics</u>									
Name of the Lecturer : <u>Dr. P.B. Sandhya Devi</u>				Class : <u>B.Sc. in C & M.P.S</u>	Year : <u>2022-23</u>	Paper : <u>Modern Physics</u>							
Month	Week	Hours available	Syllabus/Topic	Additional Input/ Value Addition provided/Taught	Curricular Activity				Co-curricular Activity				
					Activity Conducted	Hours allotted	Whether conducted	If not alternate date	Activity Conducted	Hours allotted	Whether conducted	If not alternate date	
January	1 st week	3	Nuclear forces, Yukawa meson theory	MCA									
	2 nd week	2	Liquid drop model, Shell model	MCA	Artist	01	Yes	-	WED Celebrate	01	Yes	-	
	3 rd week	2	GM counter Solid state detector	Prblm.									
	4 th week	4	Wilson cloud chamber elementary particles	-									
	5 th week	1	Nano materials, etc alignment, S-V ratio etc	-					Student Seminar	01	Yes	-	
February	1 st week	3	0D, 1D, 2D Nanomaterials CNT	-									
	2 nd week	4	Properties of Nano materials						Student Seminar	01	Yes		
	3 rd week	4	Application of nano materials & Semiconductors & Superconductivity	MCA	Artist	01	Yes	-					
	4 th week		-										
	5 th week												

P.B. Sandhya Devi
Signature of the Lecturer

P.B. Sandhya Devi
Signature of the Department In-Charge

[Signature]
Signature of the Principal
GOVT. DEGR. COLLEGE



GOVERNMENT DEGREE COLLEGE

AVANIGADDA - 521121. ANDHRA PRADESH
NAAC - B



TEACHING DAIRY : 2022 - 2023

Name of the Lecturer : Dr. P.B. Sandhya Sni

Department of : Physics

GOVERNMENT DEGREE COLLEGE, AVANIGADDA - 521121. ANAPURMA PRAD

Month :

Name of the Department / Subject :

S.No.	Date	Day	Class	Period	Theory/ Practical	Topic Covered	Methodology Adopted	No of Students attended	Teaching Aids used	Student Activity Conducted
	28.11.2022	Monday	II MMS	2 nd	Th	Problem.	Problem solving method	19	PPT	Problem
	29.11.2022	Tuesday	II MMS	1	Th	Dnl - to kinetic energy D gens	derivative	18	PPT	-
	29.11.2022	Tuesday	II MMS	2	Th	Maxwell laws	derivative	21	PPT	Assist
	30.11.2022	Wednesday	II MMS	5,6	Th	mean free Path, Jackson phenom	derivative method	19	PPT	-

Signature of the Lecturer

Signature of the Department In-Charge

Signature of the Pr
At 5/11/22

GOVERNMENT DEGREE COLLEGE, AVANIGADDA - 521121. ANDHRA PRADESH

Name of the Department / Subject :

Month :

S.No.	Date	Day	Class	Period	Theory/ Practical	Topic Covered	Methodology Adopted	No of Students attended	Teaching Aids used	Student Activity Conducted	Remarks
	29.12.2022	Thursday	IIMPC	2	Th	CP/CN = F	demonstration	20	PPT	-	
	30.12.2022	Friday				NAAC WORK					
	31.12.2022	Saturday				NAAC WORK					

P. B. S. D.
Signature of the Lecturer

P. B. S. D.
Signature of the Department In-Charge

D. ...
Principal
GOVERNMENT DEGREE COLLEGE
AVANIGADDA, Krishna Dt. 521121.

GOVERNMENT DEGREE COLLEGE, AVANIGADDA - 521121. ANDHRA PRADESH

Month :

Name of the Department / Subject :

S.No.	Date	Day	Class	Period	Theory/ Practical	Topic Covered	Methodology Adopted	No of Students attended	Teaching Aids used	St At Cor
	27.02.2023	Monday				NAAC work iii sem end exams				
	28.02.2023	Tuesday				NAAC work iii sem end exams NSD Celebrations				
	01.03.2023	Wednesday				NAAC work iii sem end exam				

D. ...

Principal
 GOVT DEGREE COLLEGE
 AVANIGADDA - 521121


P. B. S. ...
 Signature of the Lecturer

P. B. S. ...
 Signature of the Department In-Charge

Signature

GOVERNMENT DEGREE COLLEGE, AVANIGADDA - 521121. ANDHRA PRADESH

Name of the Department / Subject :						Month :					
S.No.	Date	Day	Class	Period	Theory/ Practical	Topic Covered	Methodology Adopted	No. of Students attended	Teaching Aids used	Student Activity Conducted	Remarks
	30.03.2023	Thursday				Sriramanavanni spot valuation at Vissannapeta.					
	31.03.2023	Friday				spot valuation					
	01.4.2023	Saturday				spot valuation					


Principal
GOVT. DEGREE COLLEGE
AVANIGADDA, Krishna Dt. 521121.


Signature of the Lecturer


Signature of the Department In-Charge


Signature of the Principal

GOVERNMENT DEGREE COLLEGE, AVANIGADDA - 521121. ANDHRA PRADESH

Name of the Department / Subject :

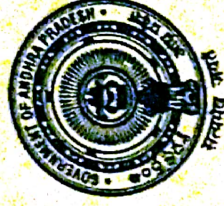
Month :

S.No.	Date	Day	Class	Period	Theory/ Practical	Topic Covered	Methodology Adopted	No of Students attended	Teaching Aids used	Student Activity Conducted	Remarks
	4-5-2023	Thursday	III BSc	11-00 Am	Th	online class series resonance ckt as a radio tunny ckt. AC sources	lecture	38	Radio	Q/A	
			I BSc	3-30 pm	Th	phase and group velocities Heisenberg uncertainty principle for x, P	lecture				
	5-5-2023	Friday	III BSc	11-00 am	Th	online class DC sources, lead acid battery	lecture & interaction	37	Shoran invert battery PPT	Q/A & Assignment	
			I BSc	3-30pm	Th	extension of Heisenberg uncertainty principle to E & T, Diffraction at single slit	lecture	28	PPT	Seminar	
	6-5-2023	Saturday	III BSc	11-00 Am	Th	online class Ni-MH and Li-ion battery.	lecture	38	animated video & PPT	Q/A	
			I BSc	3-30 PM	Th	Gamma ray ll-scope Bohr's principle of complementarity	lecture	25	PPT	Q/A	


Signature of the Lecturer


Signature of the Department In-Charge

Signature of the Principal



GOVERNMENT DEGREE COLLEGE

AVANIGADDA - 521121. ANDHRA PRADESH
NAAC - B



TEACHING PLAN : 20²² - 20²³

Name of the Lecturer : Dr. P.B. Sandhya Sni

Department of : Physics

TEACHING PLAN

Name of the Department/Subject : Physics
 Name of the Lecturer : Dr. P. B. Saravallya Sri
 Course/Group : B Sc MPC
 Paper : Heat & Thermodynamics
 Name of the Topic : Mean free path, Degrees of freedom, Principle of equipartition
 Hours required : 04

Learning Objectives	to acquire the knowledge about equipartition of energy.
Previous Knowledge to be reminded	Maxwell distribution law.
Topic Synopsis	RMS Speed $\bar{c} = 1.59 \sqrt{\frac{KT}{m}}$ most Probable Speed $c_p = 1.41 \sqrt{\frac{KT}{m}}$ average kinetic energy of a molecule $\bar{E}_k = \frac{1}{2} KT.$
Examples/illustrations	Problems.
Additional inputs	Significance & limitations of equipartition of energy.
Teaching Aids used	PPT
References cited	Heat & Thermodynamics by Brijlal & Subrahmanyam.
Student Activity planned after the teaching	Assignment
Activity planned outside the Classroom if any	PH homework Problems.
Any other activity	-

P. B. Saravallya
 Signature of the Lecturer

TEACHING PLAN

Name of the Department/Subject: Physics	
Name of the Lecturer: Dr. P. B. Sandhya Sui	
Course/Group: II B.Sc MPCs	
Paper: Heat & Thermodynamics	
Name of the Topic: Isothermal & adiabatic processes, Reversible & irreversible process Carnot's engine, Carnot's theorem, thermodynamic scale of temp.	
Hours required: 05	
Learning Objectives	To acquire the knowledge of Carnot's engine working and its applications.
Previous Knowledge to be reminded	Boyle's law I law of thermodynamics. $PV = nRT$
Topic Synopsis	Isothermal process - $PV = RT$ Adiabatic process - $PV^\gamma = \text{const}$ work done in Isothermal process $W = 2.3026 RT \ln \frac{V_2}{V_1}$ " adiabatic " $W = 2.3026 RT \ln \frac{V_2}{V_1}$ $\gamma = 1 - \frac{T_2}{T_1}$
Examples/Illustrations	Carnot engine in Ac.
Additional inputs	Extra numerical examples.
Teaching Aids used	PPT
References cited	Heat & Thermodynamics by Brijlal & Subrahmanyan.
Student Activity planned after the teaching	Seminar
Activity planned outside the Classroom if any	Assignment
Any other activity	To prepare H.C.S.

P. B. S. S. S. S.
Signature of the Lecturer

TEACHING PLAN

Name of the Department/Subject: Physics	
Name of the Lecturer: Dr. P.B. Sandhya Sri	
Course/Group: II BSc MPES.	
Paper: Heat & Thermodynamics.	
Name of the Topic: Black body - its spectral distribution - Kirchoff's law - Stefan law - Stefan Boltzmann law, Raleigh Jeans law.	
Hours required: 04	
Learning Objectives	EM radiation Types of heat transfer. Describe materials that are good reflectors, absorbers, and emitters of radiation.
Previous Knowledge to be reminded	Kirchoff's law: $\frac{E_{\lambda}}{\omega_{\lambda}} = \frac{c_{\lambda}}{\omega_{\lambda}} = \text{const.}$ Stefan - Boltzmann law $E = \sigma T^4$ Wien's law $\lambda_m T = \text{const}$ Raleigh - Jeans law $E_{\lambda} = \frac{8\pi kT}{\lambda^4}$
Topic Synopsis	
Examples/Illustrations	-
Additional inputs	Extra numerical examples.
Teaching Aids used	PP1
References cited	Unified physics volume - II 22nd edition.
Student Activity planned after the teaching	Question & Answers.
Activity planned outside the Classroom if any	Assignment
Any other activity	-

P.B. Sandhya Sri
Signature of the Lecturer

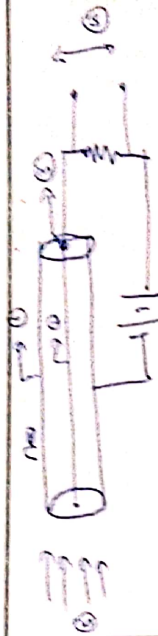
TEACHING PLAN

Name of the Department/Subject: Physics	
Name of the Lecturer: Dr. P. B. Sandhya Sri	
Course/Group: I BSc MSc & MEds	
Paper: Modern physics	
Name of the Topic: Matter waves, de Broglie hypothesis, wave length, Properties, Assisted Lecture exp	
Hours required: 06	
Learning Objectives	To understand the diffraction of electron.
Previous Knowledge to be reminded	dual nature of light dual nature of matter
Topic Synopsis	$\lambda = \frac{h}{mv}$ $\lambda = \frac{h}{\sqrt{2}mE}$ $\lambda = \frac{h}{\sqrt{2}mV}$
Examples/Illustrations	-
Additional inputs	Problems and mce.
Teaching Aids used	PPT
References cited	Quantum Mechanics by Gupta Kumar Sharma.
Student Activity planned after the teaching	Assignment
Activity planned outside the Classroom if any	Synopsis Preparation
Any other activity	-

P. A. S. S. S.
Signature of the Lecturer

GOVERNMENT DEGREE COLLEGE, AVANIGADDA-521121, ANDHRA PRADESH

TEACHING PLAN

Name of the Department/Subject: Physics	
Name of the Lecturer: Dr. P.B. Sankaraya Sa	
Course/Group: B.Sc. 1 st & 2 nd sems	
Paper: Modern physics.	
Name of the Topic: G.M. Counter, cloud chamber, solid state detectors	
Hours required: 03	
Learning Objectives	To understand the working, merits and demerits of nuclear detectors.
Previous Knowledge to be reminded	Ionisation counter chamber and proportional counter
Topic Synopsis	 <ol style="list-style-type: none"> 1. metal tube 2. wire 3. mica window 4. vacuum tube amplifier 5. Ionisation chamber.
Examples/Illustrations	ionisation process in Faraday cylinder
Additional inputs	M.C.Q. of taught topics and bubble chamber, spark chamber.
Teaching Aids used	PPT
References cited	Nuclear Physics by R. Misra
Student Activity planned after the teaching	PPT Preparation.
Activity planned outside the Classroom if any	M.C.Q. Preparation
Any other activity	Synopsis Preparation

P.B.S.S. Signature of the Lecturer