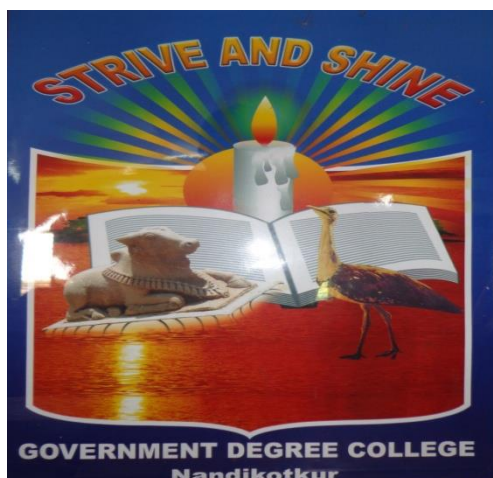


Government Degree College, Nandikotkur



1.1.1: The Institution ensures effective curriculum planning and delivery through a well-planned and documented process including Academic calendar and conduct of continuous internal Assessment

CURRICULUM PLAN 2019-20

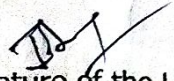
CURRICULAR PLAN - GOVT DEGREE COLLEGE, NANDIKOTKUR

Curricular plan for the Semester: I for the Academic Year: 2019-2020

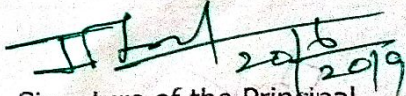
Sub: physics Paper: I Title: Mechanics & Properties of matter

Name of the Lecturer: J. muralidhar Year: I Class: B.Sc. MPCs Medium: English

S.No	Month	Week	Hours Available	Syllabus Topic	Additional Input / Value Addition	Curricular Activity				Co- Curricular Activity				Remarks
						Activity (Other than Teaching & Practicals)	Hrs. Allotted	Conducted (Y/N)	If not Alternate Date	Activity	Hrs. Allotted	Conducted (Y/N)	If not Alternate Date	
	June	1	04	<u>Unit-I:-</u> Scalar and vector fields, Gradient of a scalar field and its physical significance, Divergence of a vector field.	<u>Equipotential Surfaces</u> <u>Gravitational field</u>	<u>Explanation</u>								
		2	04	Physical significance of divergence of a vector field, curl of a vector field and its physical significance	<u>Electric field intensity</u> <u>Magnetic field</u>	<u>Discussion</u>								
		3	04	vector integration, Gauss theorem and Stokes theorem	<u>Vector differentiation</u> <u>Green's theorem</u>	<u>Explanation</u>				<u>Problem solving method</u>				


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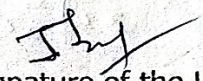
CURRICULAR PLAN - GOVT DEGREE COLLEGE, NANDIKOTKUR

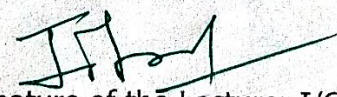
Curricular plan for the Semester: I for the Academic Year: 2019-2020

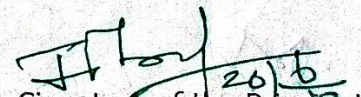
Sub: Physics Paper: I Title: Mechanics & Properties of matter

Name of the Lecturer: J. Muralidhar Year: I Class: B.Sc. MPCs Medium: English

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	June	4	04	<u>UNIT-II:-</u> <u>Laws of motion, motion of variable mass system, & motion of a rocket.</u>	<u>Inertial & non-inertial reference frames</u>	<u>Question & Answer method</u>				<u>Preparation of models</u>				
	July	1	04	<u>Conservation of energy and momentum, Collisions in two and three dimensions</u>	<u>Center of mass & Centre of Gravity</u>	<u>Discussion</u>				<u>Assignment</u>				
		2	04	<u>Concept of Impact Parameter, Scattering cross-section, Rutherford Scattering</u>	<u>Inelastic collisions, Coriolis force</u>	<u>Discussion</u>								


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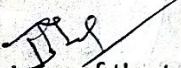
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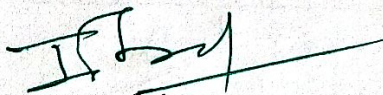
Curricular plan for the Semester: I for the Academic Year: 2019-2020

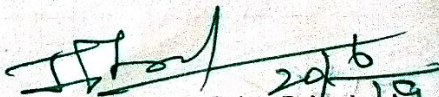
Sub: Physics Paper: I Title: Mechanics & Properties of matter

Name of the Lecturer: J. Muralidhar Year: I Class: B.Sc. MPC Medium: English

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	July	3	04	UNIT-III Rigid body, Rotational kinematic relations, equation of motion for a rotating body	Combined translational & rotational motion of a rigid body	Explanation								
		4	04	Angular momentum, Euler equations and its applications.	Inertia tensor.	Explanation								
	August	1	04	Precession of a top, Gyroscope, precession of the equinoxes.	Spinning atoms freely rotating symmetric top	Discussion				Preparation of chart				


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Curricular plan for the Semester: I for the Academic Year: 2019-2020

Sub: Physics Paper: I Title: Mechanics & Properties of matter

Name of the Lecturer: _____ Year: _____ Class: _____ Medium: _____

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	August	2	04	Elastic Constants and their relations, Poisson's ratio and Poisson's ratio in terms of γ, η, K .	Mechanical Properties of materials.	Discussion								
		3	04	Classification of beam, types of bending, Point load, distributed load	types of supports to beams & reaction forces	Explanation				Chart preparation				
		4	04	Shearing force and bending moment, Sign conventions, Central <u>UNIT-IV:</u> Central forces - def. & Examples	Electro-static force	Discussion				Study project				

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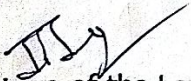
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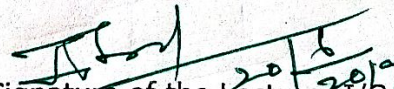
Curricular plan for the Semester: I for the Academic Year: 2019-2020

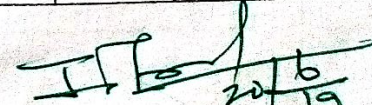
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Name of the Lecturer: J. Muralidhar Year: I Class: B.Sc. Mps Medium: English

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						Activity (Other than Teaching & Practicals)	Hrs. Allotted	Conducted (Y/N)	If not Alternate Date	Activity	Hrs. Allotted	Conducted (Y/N)	If not Alternate Date	
	SEP	1	04	Characteristics of central forces, Conservative nature of central forces, Conservative force as a negative gradient of Potential energy.	curl of a conservative force.	Explanation				Seminar				
		2	04	Equation of motion under a central force. Kepler's laws	Motion in fixed plane	Question & Answer method								
		3	04	Kepler's I law, II law and III law, motion of satellites.	Geo-centric Satellite	Explanation				Chart preparation				


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Curricular plan for the Semester: I for the Academic Year: 2019-2020

Sub: Physics Paper: I Title: Mechanics & Properties of matter

Name of the Lecturer: J. Muralidhar Year: I Class: B.Sc., MPC Medium: English

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	SEP	4	04	Idea of GPS. UNIT-V: Introduction to relativity, Galilean relativity, absolute frames.	Galilean Invariance	Discussion								
	OCT	1	04	Michelson-Morley experiment, negative results, postulates of special theory of relativity	Interference Phenomena	Explanation				Chart Preparation				
		3	04	Lorentz transformation, Time dilation, length contraction	Concept of Simultaneity	Explanation				Assignment				

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Curricular plan for the Semester: I for the Academic Year: 2019-2020

Sub: Physics Paper: I Title: Mechanics & Properties of matter

Name of the Lecturer: J. Muralidhar Year: I Class: B.Sc. MPCs Medium: English

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	OCT SEP	4	04	<u>Length Contraction,</u> Addition of velocities, mass-energy relation, Four-vector formalism. Revision of questions of exam point of view	Variation of mass with velocity, Pair Annihilation	Explanation				Seminar				


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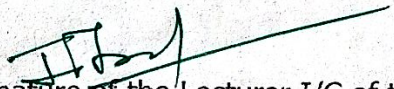
Curricular plan for the Semester: III for the Academic Year: 2019-2020

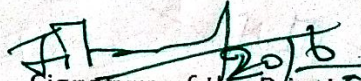
Sub: Physics Paper: III Title: Wave Optics

Name of the Lecturer: J. Muralidhar Year: II Class: B.Sc. MPCs Medium: English

S.No	Month	Week	Hours Available	Syllabus Topic	Additional Input / Value Addition	Curricular Activity				Co-Curricular Activity				Remarks
						Activity (Other than Teaching & Practicals)	Hrs. Allotted	Conducted (Y/N)	If not Alternate Date	Activity	Hrs. Allotted	Conducted (Y/N)	If not Alternate Date	
	June	1	04	<u>UNIT-I :</u> Introduction to Aberrations, monochromatic aberrations, Spherical aberration	lenses - Image formation	Explanation				Study Project				
		2	04	Methods of minimizing Spherical aberration, Coma & Astigmatism.	Ramsden eye piece	Explanation				group discussion				
		3	04	Curvature of field, distortion, Chromatic aberration, achromatic doublet.	Huygen eye piece	Question Answer method				Quiz				


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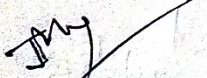
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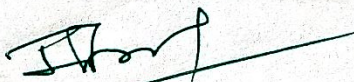
Curricular plan for the Semester: II for the Academic Year: 2019-2020

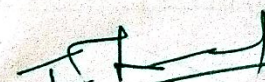
Sub: Physics Paper: II Title: Wave Optics

Name of the Lecturer: J. Muralidharan Year: II Class: BSC, MPLS Medium: English

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						Activity (Other than Teaching & Practicals)	Hrs. Allotted	Conducted (Y/N)	If not Alternate Date	Activity	Hrs. Allotted	Conducted (Y/N)	If not Alternate Date	
	June	4	04	Achromatization for two lenses in contact and separated by a distance, UNIT-II: Principle of superposition, Coherence types, Fresnel's biprism - determination of λ of light.	Conditions for achromatic doublet.	Explanation								
	July	1	04	Phase change on reflection, cosine law (reflected & transmitted), Colours of thin films, wedge shaped film.	Conditions of interference	Explanation				Preparation of charts				
					During rain they find colours on rain water	Seminar								


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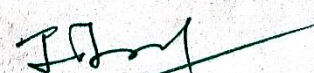
Curricular plan for the Semester: III for the Academic Year: 2019-2020

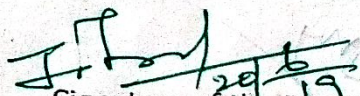
Sub: Physics Paper: III Title: Wave Optics

Name of the Lecturer: J. Murakishay Year: II Class: B.Sc. MPCs Medium: English

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	<u>July</u>	<u>2</u>	<u>04</u>	wedge film - determination of diameter of wire, Newton's rings in reflected light, Michelson Interferometer.	Interference in soap bubble	Colours of rain drops during rain				<u>Seminar</u>				
		<u>3</u>	<u>04</u>	<u>UNIT-III</u> : Introduction to diffraction, types of diffraction, Fraunhofer diffraction due to single slit and double slit.	one loud voice teaching is heard by the lecturer in next class room	<u>Explanation</u>				<u>Chart preparation</u>				


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