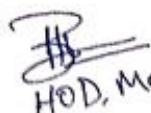


<b>Discipline:</b> <b>MECHANICAL</b>	<b>Semester:</b> <b>3rd</b>	<b>Name of the Teaching Faculty:</b> <u>Cheranji b Patro</u> <b>PTGF : Mechanical</b>
<b>Subject: SOM</b>	<b>No. of days/per week class allotted:</b> 4	<b>Semester From date:</b> 15-9-22 <b>To date:</b> <b>No of weeks:</b> 15
<b>Week</b>	<b>Class Day</b>	<b>Theory Topics:</b>
1 <sup>st</sup>	1 <sup>st</sup>	<b>Simple stress&amp; strain</b>
	2 <sup>nd</sup>	Types of load, stresses & strains,(Axial and tangential) .
	3 <sup>rd</sup>	Hooke's law, Young's modulus, bulk modulus, modulus of rigidity
	4 <sup>th</sup>	Poisson's ratio, derive the relation between three elastic constants.
2 <sup>nd</sup>	1 <sup>st</sup>	Principle of super position, stresses in composite section
	2 <sup>nd</sup>	Temperature stress, determine the temperature stress.
	3 <sup>rd</sup>	stress in composite bar (single core) .
	4 <sup>th</sup>	Strain energy and resilience.,
3 <sup>rd</sup>	1 <sup>st</sup>	Stress due to gradually applied, suddenly applied and impact load .
	2 <sup>nd</sup>	Simple problems on above. ,
	3 <sup>rd</sup>	<b>Thin cylinder and spherical shell under internal pressure</b>
	4 <sup>th</sup>	Definition of hoop and longitudinal stress, strain
4 <sup>th</sup>	1 <sup>st</sup>	Derivation of hoop stress, longitudinal stress, hoop strain, longitudinal strain and volumetric strain.
	2 <sup>nd</sup>	Computation of the change in length, diameter and volume
	3 <sup>rd</sup>	Simple problems on above .
	4 <sup>th</sup>	
5 <sup>th</sup>	1 <sup>st</sup>	<b>Two dimensional stress systems,</b>
	2 <sup>nd</sup>	Determination of normal stress,
	3 <sup>rd</sup>	shear stress and resultant stress on oblique plane
	4 <sup>th</sup>	Location of principal plane and computation of principal stress

  
HOD, Mech.

Cheranji b patro (PTGF)

